

# INSIDE DOPE

Learn to live and laugh—  
Thus delay your epitaph

By **GEORGE F. TAUBENECK**

Stories of the Week  
Gag of the Week  
Animal Crackers  
Epitaph on Maine Tombstone  
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Feeling Weary?  
Ode to Dior  
This Is Good?  
Cigarettes and You  
Personal Mention  
Reader Writes Right

## Stories of the Week

Woman's voice over the telephone:

"Who won the Oxford-Cambridge boat race?"

Sighing, an overworked night sports desk man asked for her telephone number, and said he'd call her back.

Which he did, after checking the overseas tape.

"Oxford won the race," he reported.

"Oh, goody," trilled the lady. "What was the score?"

A running nude girl was followed nip-and-tuck by two men in white. A third fellow, carrying a bucket, ran a poor fourth, and finally gave up the chase. To a curious bystander he explained:

"She escaped from our asylum and we must catch her."

"Why were you carrying that bucket?"

"I caught her yesterday. It was my handicap today."

## Gag of the Week

Now we know why the Cigar Store Indians disappeared.

Lung cancer.

## Animal Crackers

A judge in Youngstown, Ohio, ruled that a woman who was frightened by a mouse, lost her balance, and fell in front of a defendant's store, is not entitled to damages unless she can prove it was the defendant's mouse.

In Toronto, carrying chickens upside down is cruel and subject to \$50 fine.

In Westport, Mass., dogs are not allowed to ride in ambulances.

In Boston, a dog must pay an inheritance tax.

In Utah, there is a law declaring that illustrations of dogs may not appear in liquor advertising.

A Chicago court ruled a wife has to get rid of her 11 poodles and nine puppies to make room for her husband.

In Fairbanks, Alaska, all moose killed with golf balls belong to the club.

A judge in Pittsburgh ruled it is beyond the power of the court to assess a husband \$7 a week for the support of his estranged wife's boxer dog.

There is an ordinance in Miami, Fla., holding it illegal for people to go around imitating animals.

## Epitaph on a Maine Tombstone

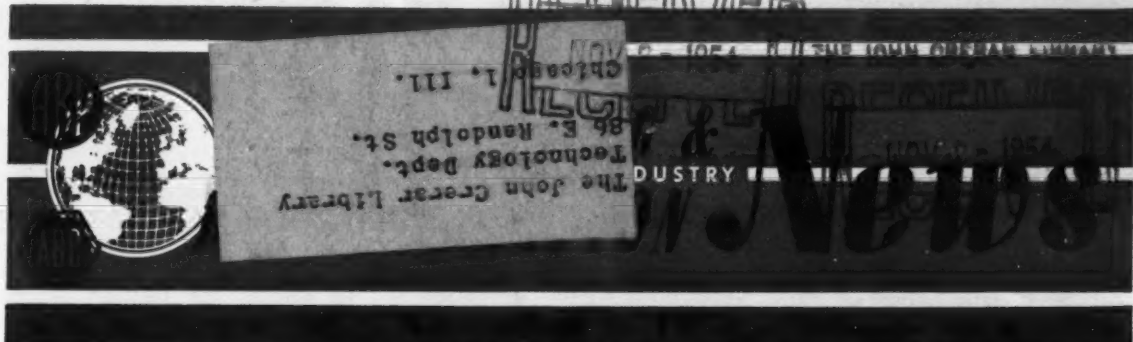
Here lies the remains of Samuel E. Untimely joined to his maker  
By the fall of a chimney in a wind-storm.

He left behind, Jane, his comely widow,

Whose address is 23 Bedford Street,  
Whose Disposition is one  
Willing to be comforted.

## Philosophy of the Week

The nearest that man can approach truth is an interpretation  
(Concluded on Page 6, Col. 1)



Reentered as second-class matter October 3, 1936 at the post office at Detroit, Michigan, under the Act of March 3, 1879.  
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## Supreme Court Declines Dealers' Fair Trade Appeals

WASHINGTON, D. C.—The U. S. Supreme Court last week declined to hear four appeals by three retailers who sought review of state court rulings upholding state fair trade laws.

The retailers are Grayson-Robinson Stores, Inc.; its subsidiary, S. Klein On The Square, Inc.; and Sam Goody, New York phonograph record dealer. They challenged decisions of the New York and New Jersey Supreme Court ordering them to stop selling below manufacturer-set prices in violation of fair trade laws.

In dismissing Grayson-Robinson's appeal and one by Klein, the U. S. Supreme Court held that no substantial Federal question was involved. A second appeal by Klein and Goody's appeal were denied without comment.

Noting that they have refused to sign resale price maintenance contracts, the firms maintained that fair trade laws violate their constitutional rights. They claimed that the laws, as applied to non-

(Concluded on Page 17, Col. 5)

## New Director of Products Position at Norge Div. Goes to Wm. C. Conley

CHICAGO—Appointment of William C. Conley to the newly-established position of director of products was announced by the Norge Div. of Borg-Warner Corp.

In this position Conley will supervise and coordinate activity of all Norge home appliances product managers, according to R. C. Connell, vice president of sales.

Previous to this appointment Conley was executive vice president.

(Concluded on Back Page, Col. 5)

## Bower and Twist Named By Sherer-Gillett Co.

MARSHALL, Mich.—John H. Coolidge, president of Sherer-Gillett Co., has announced the appointment by the board of directors of L. O. Bower as executive vice president.

He formerly held the office of vice president and assistant to the president.

Coolidge also announced the promotion of John S. Twist to vice president and director of sales.

Bower joined the company in 1943 and was successively assistant sales manager, sales manager, and vice president, to which office he was named in 1947. In 1949 he became a director of the company.

He is a graduate of Bowling Green State university, Bowling Green, Ohio, and took courses also at the University of Wisconsin.

Graduating from Michigan State  
(Concluded on Page 4, Col. 5)

## '55 Gibson Line Unveiled for Distributors

Firm To Enter Package Air Conditioning Field With Models from 2-5 Hp.

CHICAGO—A refrigerator without a freezer compartment for families with home freezers and another with the freezer in the middle, highlight the eight-model 1955 refrigerator line unveiled for distributors here recently by the Gibson Refrigerator Co.

The distributors also learned that Gibson is going into the package air conditioning unit field with a line of 10 models ranging in size from 2 to 5 hp. The self-contained units for home and office have water-cooled condensers, convenient controls, duct connections, and are available for single or three-phase installation.

At the same time, Gibson showed its distributors a five-model room air conditioner line, seven freezers, and five electric ranges.

The refrigerator without a freezer compartment, called the world's first by J. L. Johnson, vice president in charge of sales, has 11-cu. ft. capacity. The cooling mechanism is mounted in the rear of the box. Only cold plate inside is a narrow shelf at the center rear for holding two ice cube trays. This is concealed behind the "Swing'r Shelf" designed to hold tall bottles.

Called the "Market Master," this  
(Concluded on Back Page, Col. 1)

## ARI Meeting Dates Set For Next Four Years

WASHINGTON, D. C.—Dates for the annual meetings of the Air-Conditioning & Refrigeration Institute (ARI) have been established for the next several years, it has been announced by George S. Jones, executive director.

All of the meetings will be held at The Homestead, Hot Springs, Va. The meeting next year (1955) will be June 5 to 8. In 1956 the meeting will be held the first week in May, and in 1957 and 1958, the second week in May.

## Freezers Overcome Bad Publicity as 'Fast Buck' Operators Drop Out

NEW YORK CITY—"The home food freezer is starting anew and more quietly in its effort to revolutionize American food-buying habits," the Wall St. Journal declared in a feature article recently.

The Journal, in a survey of the industry, found that freezers had shed much of the bad publicity gained over the past few years. The "fast buck operators" were dropping out of the business and manufacturers and retailers were looking forward to developing a steady, gradually increasing volume.

"Today, Better Business Bureau officials confirm that customer complaints of sharp practices in  
(Concluded on Page 8, Col. 1)

## Packed Program Planned by ASRE In Phila. Nov. 28

NEW YORK CITY—The ardent engineer attending the 50th annual meeting of the American Society of Refrigerating Engineers at the Benjamin Franklin Hotel in Philadelphia Nov. 28 to Dec. 1, is going to wish he were twins.

The program committee, headed by Dan D. Wile, has arranged an almost continuous "double feature" program, with two conferences, forums, symposiums, or technical sessions going on at once throughout the entire three days.

Only during the first technical session on Monday, Nov. 29, will there be no other competing feature.

For the purpose of increasing audience participation and stimulating discussion, the program committee has arranged a series of informal conferences and forums to run right along with the technical sessions at which formal papers will be read.

The technical program will start right off Monday morning with two parallel conferences. An educational engineering conference, presided over by Prof. E. J. Reed of Duke university, will consider the problem of specialized versus  
(Concluded on Page 17, Col. 3)

## H. W. Welker, Jr. Is New ARW President

ST. LOUIS—Air Conditioning and Refrigeration Wholesalers, the association of refrigeration and air conditioning equipment and supplies wholesalers formerly known as "REWA," turned its annual meeting here last week into one of the liveliest sessions in years, with the membership pledging itself to greater efforts in the promotion of the products that they handle.

With a "different" type of program developed mainly through the efforts of Executive Secretary Starr Hull, practically every one of the members present found himself participating some way in discussions centering about ways and means of increasing sales, and on the need for more uniform policies by the manufacturers which they represent.

New president of the Air Conditioning and Refrigeration Wholesalers is H. W. Welker, Jr., president of Hasco, Inc., Greensboro,  
(Concluded on Back Page, Col. 3)

## NEMA Reports Refrigerator Sales Up 10% In August

NEW YORK CITY—In August, for the first time this year, sales of household refrigerators by the 15 firms reporting to the National Electrical Manufacturers Association were higher than in the corresponding month of 1953.

Total sales for this month were 10% ahead of last year although sales for the eight months were 11% behind the 1953 pace.

In July, sales within the United States exceeded the corresponding  
(Concluded on Page 17, Col. 1)

## Amer. Motors Sets Up New Operating Units

Lawson Named Exec. V.P., Appliance Div.; Chapman Kelvinator V.P., Gen. Mgr.

NEW YORK CITY—A new operational program for American Motors Corp. based on the establishment of three autonomous manufacturing and marketing divi-



C. T. LAWSON

sions within the company was disclosed last week by George Romney, president.

Romney identified the new operating units as Appliance, Export and Subsidiaries, and Special Products divisions. Each of these, he said, would operate autonomously but would function in full coordination with the automotive and other divisions as an integral part of American Motors.

Romney also announced two major executive appointments, implementing the new program which calls for integration of the appliance operations of American Motors into a self-contained unit within the parent company.

Charles T. Lawson has been named executive vice president in charge of the appliance division of the corporation, which includes the Kelvinator Div., a wholly-owned laundry equipment subsidiary, Altorfer Brothers Co. of Peoria, Ill., and appliance research engineer—  
(Concluded on Page 4, Col. 4)

## Airtemp Shows New Year-Round Unit

DAYTON—Marketing of a new year-round residential air conditioning combination, the "Space-saver," featuring a newly-developed "V"-type cooling coil, has been revealed by Airtemp Div. of Chrysler Corp.

The new coil was developed by Airtemp's engineering staff as a solution to the problem of lack of space for the installation of residential air conditioning equipment, according to Carl E. Buchholzer, president. He said the combination can be used in "every home now being built and every older home with forced air heating."

"Incorporated as part of the  
(Concluded on Page 4, Col. 2)

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## To Enforce Second Hand Dealer License Rule In D. C. November 1

WASHINGTON, D. C.—Starting Nov. 1, local appliance dealers and others dealing in second hand merchandise—and that includes trade-ins—will be required to have a second hand dealer's license, the city commission decided recently.

Merchants who deal in second hand goods only as an adjunct to their business of selling new merchandise have been fighting for three years to have themselves exempt from the D. C. police regulation requiring such a license. They had hoped to remain exempt until Congress convenes in January when they could attempt to get the law changed. Congress makes the laws governing the District of Columbia.

The merchants, however, did get some relief from the technical provisions of the law by gaining a status as "Class B" second hand dealers. Class B dealers do not have to hold their second hand merchandise for 15 days unless they plan to sell it out of town. They will not have to be fingerprinted, and they will not be required to file daily reports to the police on the second hand goods they accept.

They will, however, have to keep complete records of the used goods they buy and the identifications of persons from whom they accept it.

## '55 Chevrolets Offer 'All-Weather' Air Conditioning Unit

DETROIT—Unveiling its 1955 models, Chevrolet Motor Div. of General Motors Corp. announced that it is introducing an "all-weather" air conditioner which will be available with V8's.

"Mechanism for this impressive comfort feature," the company explained, "is located underneath the hood and instrument panel, leaving the luggage compartment clear. Nozzles to expel cool air into the passenger compartment are at ends of the instrument panel."

Chevrolet said its "Dry Air" ventilation feature is "a perfect adjunct" to the air conditioner.

"This feature involves an arch-shaped plenum chamber that channels fresh air from a slotted cowl vent," it was pointed out. "Drainage from the chamber prevents any water from reaching passengers, even in rainiest weather. Cowl-installed and extended to the frame on each side, the plenum chamber acts as a structural brace."

### Savannah Firm Opens

SAVANNAH, Ga.—J. A. Van Dyke, manager and co-owner, has announced the grand opening of Atlantic Heating & Air Conditioning Co., sales and service firm located at 2505 Bull St.

### No Jurisdiction

## Appeal Ruling of Arkansas Public Service Commission

LITTLE ROCK, Ark.—A ruling by the Arkansas Public Service Commission that it lacked authority to order a public utility firm to stop selling appliances and air conditioning equipment was appealed recently to the Pulaski County Circuit Court here.

On the ground that it lacked jurisdiction, the PSC on Sept. 13 dismissed a petition by the Refrigeration and Air Conditioning Div. of the Associated Mechanical Contractors of Arkansas charging unfair competition by the Arkansas Louisiana Gas Co. in the handling of air conditioning and refrigeration appliances and installation.

Through its attorney, Eugene R. Warren, the trade group has now asked the court to send the case to the PSC "with directions that it assume jurisdiction of the cause and hear the petitioner's complaint on its merits."

How soon the court might act had not been indicated at this writing.

The original petition to the PSC, which was the first of its kind in Arkansas, had asked the commission to order the company to "cease and desist" from its non-public utility operations.

The petition alleged that in 1952

and 1953 the company subsidized its non-public utility operations to the extent of \$70,000 annually and was using its assured profits as a protected monopoly "in a destructive competition with private enterprise."

The company, which has been merchandising appliances in Arkansas since 1929, filed a motion to dismiss the petition on the ground that the commission had no authority in the case.

### IRS Clarifies Which Type Of Air Conditioning Unit Is Subject to 10% Excise Tax

WASHINGTON, D. C.—A clarification on which types of self-contained air conditioning units are subject to the 10% manufacturers' excise tax has been issued by the Internal Revenue Service.

According to the agency, the type includes a unit, whether a factory-made encased assembly or one sold for assembly on installation, primarily designed for free delivery of air and for installation in or in front of a window or other opening which:

1. Contains a means for moving outside air through its condenser.
2. Incorporates means for cooling, dehumidifying, and circulating the air of a room or other enclosure.
3. Has a total motor horsepower or less than 1 hp. for motor-driven compressor types, or, in the case of absorption types, a total cooling capacity of less than 10,000 B.t.u. per hour.

### Room Unit Sales 2nd Only To Refrigerators In Omaha Public Power District

OMAHA, Neb.—More room air conditioners were sold in the area served by the Omaha Public Power District during the first eight months of 1954 than any other major appliance except refrigerators, OPPD figures show.

Refrigerators outsold room air conditioners by only 97 units. Dealer sales of room units through August totaled 4,241, and those of refrigerators 4,338. In August, 265 room units and 651 refrigerators were sold.

The OPPD figures were based on reports from 99 dealers.

Sales of other appliances for August and the first eight months were reported as follows: Ranges—255, 2,100; water heaters—35, 489; freezers—159, 1,145; conventional washers—358, 2,478; automatic washers—299, 2,613; dryers—149, 1,218; dishwashers—18, 176; dehumidifiers—17, 123.

## Service Clinic Planned For Nov. 6 at Lansing By Michigan RSES

LANSING, Mich.—A statewide service clinic of the Michigan Association, Refrigeration Service Engineers Society, will be held at the Reo Clubhouse on S. Washington Ave. here on Nov. 6, it has been announced.

Educational programs are to begin at 2 p.m. and will be completed at 5:30 p.m., after which dinner will be served.

Clint Horning, educational chairman of the Wolverine Chapter, gave details on "the top-notch program and people who will be in charge of the clinic" as follows:

Open self-service equipment—John Spence and Art McCombs, Hussmann Refrigeration, Inc.; Tecumseh products—Bob Boyd, Charles Manley, and Ralph Hiatt, Tecumseh Products Co.; Kelvinator refrigeration—Desmond F. Miller, Certified Appliance Co., Inc., service organization for Kelvinator's Detroit zone, and Neal J. Collins of Kelvinator headquarters, Detroit.

"With the exception of a preliminary talk, the entire program is to be devoted to individual questions and answers by the above-mentioned experts and the servicemen at various booths," Horning explained.

He added: "Because of the wide acceptance of the September Kalamazoo clinic meeting, bigger and better meetings are being planned for each of the RSES chapter cities."

# Every sign points the way to: DEALER PROFITS WITH G-E PACKAGED AIR CONDITIONERS



**SALEABILITY!** Sealed-in cooling unit, muggy weather control, directional airflow, winter heating and dozens of other engineering features.

**WARRANTY!** Unmatched 5-year protection gives you replacement cycle, freight paid both ways, and generous labor allowance.

**FINANCING!** Two attractive "user" plans that make it easy for prospects to buy. Plus three "dealer" plans so you can stock adequately, expand fast, without tying up working capital.

**BEAUTY!** Streamlined, compact models that blend with any decor, add new beauty to stores and offices. Wrinkle finish resists scratches and smudges.

**VERSATILITY!** Five basic models—one for every type of commercial or industrial enterprise, big or small. Models available in 3-5 1/2-10 and 15 tons.

**ADVERTISING!** Full-page advertisements all year round in leading national magazines, plus the hardest-hitting direct mail campaign you ever saw. A barrage of special promotional material, too!

Progress Is Our Most Important Product

GENERAL ELECTRIC

## G-E Exclusives Help Dealers Build Profits!

Every feature of General Electric Packaged Air Conditioners—and every G-E "sales help"—is pointed at one thing...a profitable "partnership" between G.E. and its dealers!

That's because G.E. knows that any company is only as good as the dealers who represent it. Good dealers expect a good product...with the sort of sales help that gives them an edge on competition. With General Electric, you get both!

Yes, G-E Dealers travel faster and profit more! Little wonder that G.E.'s share of the packaged air conditioner industry has doubled in the last two years!

## A milestone! New G-E Dealer Profit Plan helps you get year-round sales!

It's hot off the press! A completely new plan that makes it easy for you to sell every month of the year. Big money in the summertime—and in the wintertime, too! You owe it to your business to look over this wonderful new "profit plan" book—unlike anything you've ever seen!

## Check Now!

SEE YOUR NEAREST G-E DISTRIBUTOR OR WRITE:

C. J. Rigby, General Electric Co., Commercial & Industrial Air Conditioning Dept., 5 Lawrence St., Bloomfield, N. J.



# Packaged AIR CONDITIONERS



Stop service calls... keep out rust and sludge... open new doors to sales acceptance!—with coolers, ice-makers, sell "Taste-Master"!—checks chlorine, traps sediment; promotes service-free satisfaction with all water processing appliances. Write—

**Filtrine** MANUFACTURING CO. BROOKLYN 38 • N. Y. "Water Coolers and Filters for 40 Years"

**CRUSHED ICE** .....  
**SNOW ICE**.....

At the Counter!

**With these 2 NEW wonder machines**

(Each occupies only 11" x 13" counter space. Each gives the desired quantity as wanted.)

### KRUSHT-ICE Ice Crusher

A flick of the finger and it produces sanitary, uniformly-sized crushed ice for soft drinks, iced tea, iced coffee, fruit cups, salads, sea foods, etc.

### SNOW-ICE Ice Shaver

In a flash, this automatic ice-shaving machine supplies sanitary snow ice for SNOW BALLS and SNOW CONES. Also fine for bar use.

KRUSHT-ICE MACHINE ILLUSTRATED

BOOTH 139  
39th National Hotel  
Exposition  
November 8th thru 12th  
Kingsbridge Armory, N. Y. C.



ICE APPLIANCES, Inc.  
1775 Broadway, N. Y. 19, N. Y.  
Distributor and Dealer  
Inquiries Invited



# New Frigidaire Conditioners Open the Door to Millions of Air-Conditioning Prospects



New Multi-matic Frigidaire Conditioners available in 2, 3, and 5-ton capacities. Extra Compact: 2-ton unit is only 42 $\frac{3}{8}$ " x 23" x 34 $\frac{1}{2}$ ", 3-ton is 48 $\frac{1}{4}$ " x 25" x 38 $\frac{1}{2}$ ", and the 5-ton is 55 $\frac{1}{4}$ " x 28" x 38 $\frac{1}{2}$ ". Complete flexibility makes these units adaptable

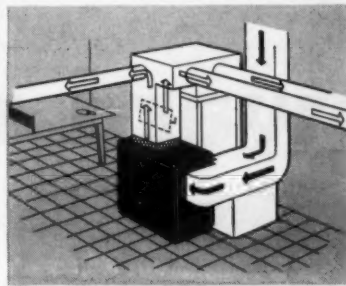
to an almost infinite variety of installations . . . as separate conditioners as well as with forced warm air furnaces. The heart of these units is the Frigidaire Extra-Duty Meter-Miser Compressor; warranted for 5 years.

## Multi-matic Models Flexible for Wide Range of Residential Installations

Article after article in popular publications is highlighting the ever-growing importance of residential summer air-conditioning . . . from the standpoint of a long-term investment as well as comfort. Some estimates even have the non-air-conditioned home an exception within as few as ten years. As this trend continues, air conditioning obviously plays a more and more important role in the future resale value of any home.

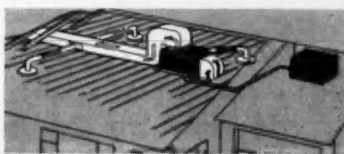
And as the importance of air conditioning grows so does the variety of installations. New homes, old homes, stores and offices all become prospects. But just how many different styles and capacities of air conditioning units must a dealer handle to take advantage of this market?

Here's the answer in the sensational new Multi-matic Frigidaire Conditioners. These simple, compact, space-saving units contain the compressor, cooling coil, condenser and blower. They are complete, ready to hook up to an existing furnace and duct-work or will operate as air conditioning alone. Yes, here are the units designed to provide wide flexibility of installation.



As a combined unit with furnace

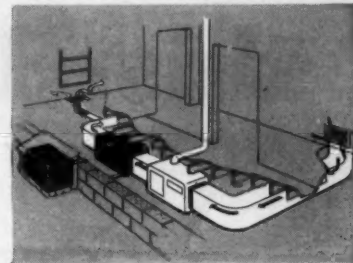
Simply making electrical and plumbing connections and tying in with existing duct-work can convert many a present furnace to summer cooling. Ready accessibility of all parts of the Frigidaire Multi-matic Conditioner through side and end panels permit installation in any position and on either side of the furnace. The unit can be furnished without blower where the furnace blower provides adequate air volume.



As a remote installation

The cooling coil and blower can be installed one place as a single unit and the

compressor another with the quickly divided sections of the Frigidaire Multi-matic Conditioner. Also it can be operated with an air-cooled or evaporative type condenser or a cooling tower in areas where water is a problem.



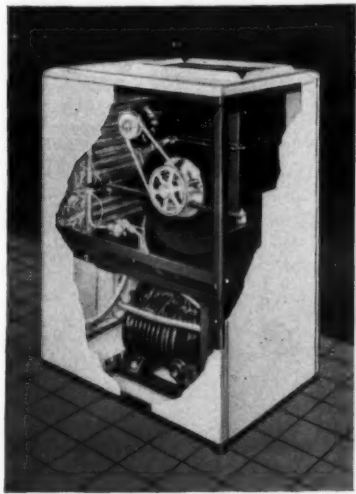
As a crawl-space installation

If desired the Multi-matic Conditioner can be divided into two sections, for installation . . . in a crawl-space, attic, or suspended from the ceiling, thus providing air conditioning in places where the lack of space has heretofore been considered a problem.

Where larger than 5-ton capacity is needed two or more Multi-matic Conditioners can be used to provide any desired amount of cooling.

## Installation and Maintenance a Serviceman's Dream

This unit was designed from the ground up for ease and simplicity of service. Unlike so many mechanical devices, in-



stallation and service simplicity have been engineered in from the start.

Every part of the interior is right in reach because the side and end panels simply lift right off—no bolts or permanent welding. The control box can be reached either from the side or front so that after installation you can still get to it regardless of the unit's location.

Entire blower section, centrifugal fan, and fan motor are easily detachable. The Throwaway type filter is right at your finger tips. Duct connections are accessible on top and in the back of the unit. Openings for plumbing and electrical attachments are all in the most advantageous positions.

Even the frame of the unit is made in two sections. The top with the Multipath Cooling Unit and expansion valve and blower; the bottom with the XD Meter-Miser Compressor and controls to allow for divided installations. Entire unit is lined with odorless, fireproof, fibrous glass, thermal and acoustical

insulation. Exterior finish of cabinet and extra hood for self-contained installations are finished in neutral Coca-Rio Beige color.

## Another Milestone in Frigidaire's Concentration on Packaged Products for Bigger Sales

Here is further proof of how Frigidaire is continuing to strengthen and deepen its lines of packaged products. For it is in these very packaged lines that the Frigidaire Commercial and Air Conditioning Dealers will find the greatest opportunity for sales. Only in these lines does he enjoy all the sales tools that proved so successful for home appliances.

He can promote complete products made by one known and respected manufacturer. He can merchandise exclusive features. He can take advantage of powerful national advertising, effective

sales plans and sound distribution policies. His salesmen can give quick, accurate estimates . . . offer prompt, skilled installation . . . and back up the sale with the assurance of factory-trained service.

Over the past ten years the policy has been paying off in doubled and redoubled sales. And further expansion of this policy with new products and wider range of models to meet greater sales opportunities promise to open up an even brighter future than ever for Frigidaire Commercial Dealers.

## ALSO ADAPTABLE TO STORES AND OFFICES



As a self-contained unit

The Multi-matic Conditioner makes an attractive self-contained unit, too, for installation without duct-work in stores and offices. For such installations a special hood with adjustable air discharge grilles is available for each of the three models. The modern styling and compact size of the units with hoods makes them ideal for many types of commercial and industrial buildings.



# FRIGIDAIRE

COMMERCIAL REFRIGERATION AND AIR CONDITIONING

—for growth and progress with General Motors



You can be sure of the  
**QUALITY**  
when you

**SPECIFY**

**READING  
COPPER  
TUBING**

FOR REFRIGERATION  
& AIR CONDITIONING  
EQUIPMENT

**READING  
TUBE CORPORATION**  
EMPIRE STATE BUILDING  
NEW YORK 1, N. Y.  
WORKS: READING, PA.



MINIMUM OF FLOOR SPACE is required with the new Airtemp "Spacesaver" featured in a typical installation, where the waterless condensing unit has been located in the yard just outside the home.

## 'V' Coil Featured In New Airtemp Units--

(Concluded from Page 1, Col. 5) furnace, the 'V' coil provides air conditioning with no loss of valuable floor space, requiring only 14½ in. of additional height above the furnace," Buchholzer pointed out. "Ductwork can be installed easily and economically."

A complete Spacesaver includes the new "V" coil (available in four models), an Airtemp waterless or water-cooled condensing unit, and an Airtemp "Lo" or "Hi-Boy" furnace.

Seamless copper tubing is used to pipe "Freon" refrigerant be-

tween the coil and condenser. The latter can be located outside the home, in the garage, in the sub-floor crawl space, or the basement.

The furnace blower forces home air through the coil, cooling and distributing the air throughout the home, it was noted.

"The 'V' coil," added Airtemp's president, "while specifically developed for our Spacesaver combination, is also available separately. It is easily adaptable to other forced air furnaces which have adequate blower capacity."

## American Motors Announces Plans--

(Concluded from Page 1, Col. 5) ing, headed by Dr. L. A. Philipp, vice president.

B. A. Chapman has been appointed vice president and general manager of the Kelvinator Div., producer of American Motors Corp.'s Kelvinator and Leonard brands of home appliances, and Kelvinator commercial refrigeration equipment.



B. A. Chapman

Under the new divisional organization plan, Romney said, all engineering, manufacturing, sales, labor relations, accounting, and other functions involving Kelvinator appliance operations would come under the supervision of the new vice president and general manager.

### ONE OF A SERIES OF MAJOR STEPS

The new operating program, Romney told a press gathering at the Waldorf-Astoria hotel here, is one of a series of major steps taken by the new corporation since the merger of Nash-Kelvinator and Hudson on May 1, to improve further its operating efficiency, the quality and diversity of its product research, and customer service.

The Export and Subsidiaries Div. will have complete responsibility for the rapidly growing international sales and manufacturing operations located in foreign countries of appliances, special products, and Hudson and Nash automobiles. It also will embrace subsidiary operations in the United States, Canada, England, and Scotland.

The Hudson Special Products Div. will handle the company's defense production program and will develop its position as a manufacturer of automotive and appliance parts.

Production and marketing of Hudson and Nash automobiles will be carried on by the automotive division, directly under the supervision of Romney.

### EXPANSION OF SUBSIDIARIES PLANNED

Romney also revealed that further expansion was under way in the company's major subsidiary operations. Specifically, he mentioned the company's plastics operation in Milwaukee, where continuing research is being made for the wider use of plastics in the automotive and appliance fields, and Ranco Inc., one of the world's largest manufacturer of automobile and refrigeration thermostatic controls, with plants in Columbus, Ohio and Glasgow, Scotland.

Redisco, the \$100,000,000 wholesale and retail appliance financing subsidiary, is currently expanding rapidly in the United States and Canada, he said.

Lawson, who has been vice president in charge of appliance distribution for American Motors and its predecessor, Nash-Kelvinator, since 1952, has devoted more than 30 years to the business of selling major electrical appliances.

He served in an executive capacity with two General Motors divisions, and is past president of the National Electrical Manufacturers Association. He is also a director of the Brand Names Foundation.

He served as general sales manager of General Motors Radio Corp., Dayton, from 1929 to 1932, when he transferred to the Frigidaire organization. He became Frigidaire's household sales manager in 1934.

Lawson joined Kelvinator in 1939 as household sales manager. He became general sales manager in 1941, and was named vice president in charge of Kelvinator sales in 1943.

Chapman has more than 20

years' experience in manufacturing and production management, beginning with his student days at the University of Detroit.

During World War II, he was plant engineer of the company's wartime aircraft propeller division at Lansing, Mich. In 1943, he was promoted to staff engineer for all plants of the corporation. Three years later he was named assistant to the late vice president Ray A. DeVlieg, with responsibilities for production in all corporation automotive and appliance plants.

He was named production manager for the corporation in 1951, and after the death of DeVlieg, was appointed manager of manufacturing for both automotive and appliance divisions in 1953.



L. O. Bower



J. S. Twist

## Sherer Appointments--

(Concluded from Page 1, Col. 2) college in 1941, Twist at once was called to active duty and assigned to the Fifth Infantry Division. He spent three and one half years overseas out of a total of four and one half years in service, being released from active duty with the rank of major.

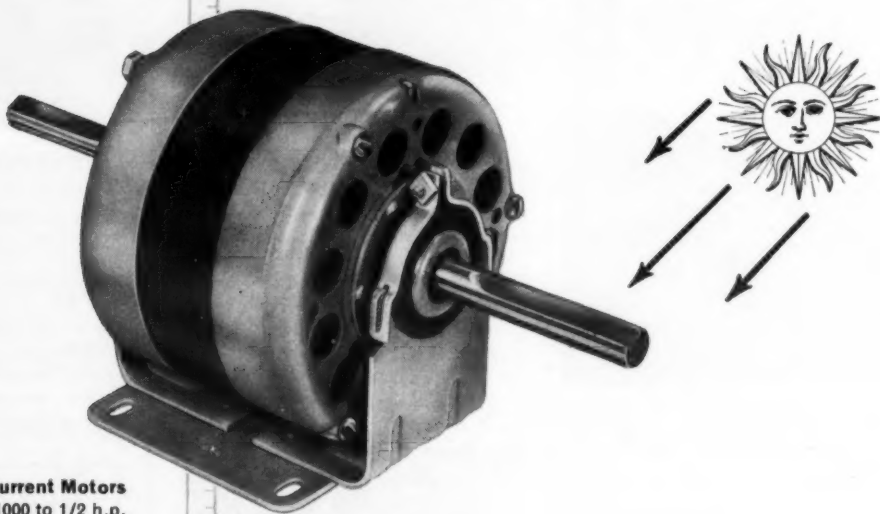
Joining the company in 1946, Twist spent two years selling in the field and then moved into the company's home office Sales Dept. He became assistant sales manager in 1949 and sales manager in 1950.

### TERRIFIC VALUES ON NAT'LLY KNOWN COMPRESSORS

NAME BRAND twin-cylinder bodies with flywheel and service valve. ½ hp.....	\$30.00
Same as above (1 hp).....	\$33.00
NAME BRAND ¾ hp 115 Volt low base condensing units.....	\$118.00
NAME BRAND 1½ hp 220 Volt complete motor compressor assembly with service valve.....	\$69.00
NAME BRAND ¾ hp fan-cooled hermetic units.....	\$34.00
(10% discount in lots of 6 or more) All equipment new and fully guaranteed.	

**MANN Refrigeration Supply Co.**  
440 Lafayette St., New York, N. Y.  
GRamercy 3-8000

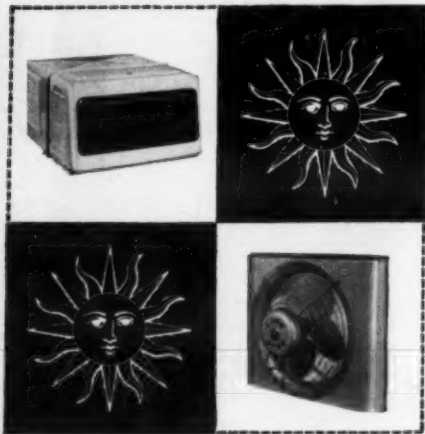
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EMC Model 5000 is a 6-pole Shaded Pole Motor with drawn steel housing and self-aligning bearings, and is available as a two speed or single speed motor with or without rubber mounts, resilient base and overload protection. H.P. ratings offered are 1/15 h.p., 1/12 h.p., 1/10 h.p. and 1/8 h.p.

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ANOTHER SALES-GETTING FIRST . . .

# NEW 1955 KELVINATOR ELECTRIC RANGE



Kelvinator's Electric Range Masterpiece Model ER 495

WITH  
**DISPOSABLE  
ALUMINUM  
OVEN LININGS!**

**Takes Drudgery  
Out of Oven Cleaning!**

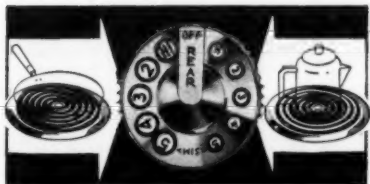
Cleaning a range oven is one of the most dreaded jobs in the kitchen. Kelvinator now gives its dealers the solution that ends this problem for good. It's the new 1955 Kelvinator Electric Range that features disposable aluminum oven linings. *What a sales feature . . . what a sales closer!*

What's more, this completely exclusive feature can be easily, quickly demonstrated—it takes just a jiffy to show how soiled oven linings can be thrown away and replaced with shining clean new ones.

This brilliant new advancement, plus a removable oven bottom, easily-removed drip pans, self-cleaning surface elements and oven element make Kelvinator *really* the world's easiest range to clean—and the easiest to demonstrate and sell! With its shining new beauty, here's the range to go places with now . . . and in 1955!

**FREE!** A year's supply of pre-cut, packaged sheets of Reynolds aluminum foil is furnished with every range equipped for Disposable Oven Linings!

**BUT THAT'S NOT ALL . . . HERE ARE MORE SALES-GETTERS  
. . . EASY TO DEMONSTRATE . . . EASY TO SELL!**



**Sales-getter!** Illuminated Dual "Picto-Heat" Switches and Instant Heat 2-in-1 "Rocket" Units provide 5 heat settings for small pans . . . 5 separate heat settings for larger pans.



**Sales-getter!** Removable Oven Bottom slides out for quick cleaning and is easily washed at the sink. New oven element is self-cleaning. "Peek-In" oven window adds further convenience.



**Sales-getter!** Bonus Broiler. Slide element out of oven . . . plug in left-hand compartment. Presto! Broil and bake at the same time. Double-Oven Luxury at a single-oven price!



**Sales-getter!** Lift-out, bowl-type porcelain drip pans on surface units are as easy to wash as a china dish. Surface units, like the oven-heating element, are self-cleaning.

## Kelvinator

Division of American Motors Corporation, Detroit 32, Michigan

**THE MOST VALUABLE FRANCHISE  
IN THE APPLIANCE INDUSTRY**

ELECTRIC REFRIGERATORS • ELECTRIC RANGES • HOME FREEZERS • WATER HEATERS • KITCHEN CABINETS AND SINKS • WASHERS • DRYERS  
IRONERS • GARBAGE DISPOSERS • WATER COOLERS • ROOM AIR CONDITIONERS • DEHUMIDIFIERS • COMMERCIAL REFRIGERATION



## INSIDE DOPE

Learn to live and laugh—  
Thus delay your epitaph

By **GEORGE F. TAUBENECK**

(Concluded from Page 1, Col. 1) of what he has observed and experienced. Truth remains constant, dependable, consistent; man's apprehension is partial, fluctuating. We say, "This was true yesterday, but false today." But accurately observed it would be more correct to state, "Yesterday's interpretation disagrees with today's discoveries." —*American Colleges Bulletin.*

The simple realization that there are other points of view is the beginning of wisdom. Understanding what they are is a great step. The final test is understanding why they are held. —*Journalism Quarterly.*

### Feeling Weary?

You may be a candidate for the Relaxation Club of America, a greatly needed organization formed recently by a group of hard working Miami businessmen. Nine preliminary rules of the club are:

(1) Take a leisurely lunch hour. If there's a sofa in your office, steal 40 winks.

(2) Never sit straight and rigid while phoning. In the office, put your feet on the desk. At home, lie down.

(3) At a party, don't try to be entertaining every minute. Eat and drink slowly and leave when bored.

(4) Don't ever run for a bus. The chances are that it will start just as you reach it.

(5) Relax while driving. Drown out back seat drivers by turning on the radio loud.

(6) Watch TV lying down. If you fall asleep, so much the better.

(7) Don't discuss controversial subjects. Merely say, "Do you really think so?" and you'll never get involved.

(8) If you find bridge playing too nerve-wracking, change to Scrabble.

(9) Finally, don't run if you can walk; don't walk if you can sit; and don't sit if you can lie down.

You can join the club by writing to Relaxation Club of America, 145 East 52nd St., New York, N. Y.

### Ode to Dior

Life must not matter  
To any boulder  
Who'd make girls flatter  
Instead of rounder.

### This Is Good?

Ninth-grade students at a school for children of United Nations personnel were assigned to write

essays on "The Elephant."

Titles submitted (by nationalities):

FRENCH—"Love Life of Elephants."

BRITISH—"Elephants Shot by My Uncle and Grandfather."

GERMAN—"An approach to the Study of Prehistoric Mastodons and Their Relation to the Concept of Cosmic Radiology In the Fragmentation of Obscure Metallurgy."

ITALIAN—"The Incident of Elephant Mating Calls In the Orchestration of Verdi."

AMERICAN—"How to Substitute Plastics for Elephant Tusks In the Mass Production of Balanced Dice."

RUSSIAN—"Marx Invented the Elephant; Stalin Tamed It; and Malenkov Will Abolish It!"

### Cigarettes and You

Not so long ago there was brought to public notice a study by some doctors which linked a rise in lung cancer to a like rise in cigarette smoking.

The statistics disturbed many people and we cut down to a pack a day until some other doctors said they thought the rise in the disease rate was attributable to city smog.

Still others said it might be the sulfur from the match or the fumes from lighter fluid.

Just the other day in Washington a famous Paris surgeon linked cancer in women to the well-known

fact that women have children. Dr. Pierre Denois said that his studies indicate that women who have children early in life develop cancer earlier than women who never have any children.

And the same day in Chicago Dr. Starry, professor of surgery at the University of Oklahoma, told some other surgeons that an increase of ulcers in women should be blamed on cigarettes, coffee, cocktails, the mid-morning coffee break, and the Internal Revenue Department.

Dr. Starry concluded that because of the coffee break people drink more coffee than they would if there were no coffee break, which would seem to be a logical conclusion. Also they smoke cigarettes. And after work some people drink cocktails. All of these habits, he said, can form acids which can lead to ulcers. His conclusions were based on 437 serious ulcer cases, of which 27% were women.

There was one bright spot in Dr. Starry's remarks. He also said flareups in several ulcer cases come in March and he blamed this on income tax payment deadlines. Clearly, here is an area in which the government can do something for the health of the people. We daresay elimination of the income tax would clear up more ulcer cases than anything the doctors can do with statistics.

Somebody ought to remind the doctors that all their woeful figures only add up to the big statistic anyway—the widely accepted theory that something's going to prove fatal to everybody sooner or later. And meanwhile, we could do with fewer unhappy conclusions that everything people like to do is usually bad for them. —*Wall Street Journal.*

### Personal Mention

Probably no man in our industry is better liked than Ed Flannery—treasurer of Bush Mfg. Co., and a past president of our industry association. Like many of our leaders, he gets more fun out of living than by making money.

Did you see that wonderful picture of Ed frolicking happily, in a recent issue of *Life* magazine? If you didn't please look back for it. That photo will make you happy!

### Reader Writes Right

Koch Refrigerators, Inc.  
North Kansas City, Mo.

Hey "Dope," ya Dope:

In your column recently you wrote:

"Television may have hurt gate receipts, but it helped Mel Parnell, stylish southpaw traded from Boston to Washington.

"Consistently a good pitcher (over a period of several years), Mel did have trouble—oddly enough—with left-handed sluggers. They tagged him for extra base hits uncomfortably often.

"While watching a televised game 'Shanty' Hogan (who had caught for the Braves and Giants) saw something. Parnell was pitching overhand to lefties. And that was wrong, according to his experience.

"Shanty" advised Parnell to side-arm the portside power hitters. Mel tried it, and won his 100th game. Furthermore, his confidence increased so much that he continued to baffle batters he formerly had feared."

... which all adds up to "Strike Three for Taubeneck."

You wouldn't mean McDermott, would you? Last I heard... the week of Sept. 20, Brother Parnell was still wielding that left arm for Messrs. Boudreau and Cronin. He's been out most of the year, but he's remained on the Red Sox roster.

Maybe you meant Nick Altrock?

SAM GLASS

Answer: Eagle-eyed sportsfan Sam Glass is quite right. It was McDermott who went to Washington. Parnell is the story's hero.

**NOLIN**  
*Leads the Field*



**New**  
**Dry Beverage Cooler**

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ask for the **PENN**  
*Complete Line of*

# COOLING CONTROLS

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Don't settle for less... use Penn every time on every cooling job. **Penn Controls, Inc., Goshen, Indiana.** Export Division: 13 E. 40th Street, New York 16, N. Y., U.S.A. In Canada: Penn Controls Limited, Toronto, Ontario.



Series 246 Water Valves  
¾" to 2½" in threaded or  
flanged styles for use with all  
refrigerants.

Series 325 Time-Pressure De-  
froster automatically varies  
defrost time for any load  
condition... avoids shut-  
down time.

Series 275 Oil Protection  
Control for use on all pres-  
sure-lubricated refrigeration  
compressors.

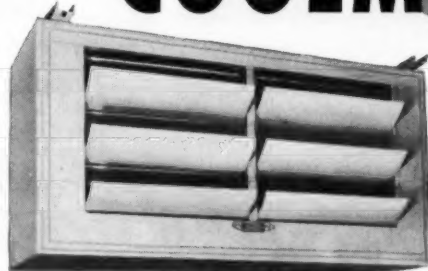
Series 270 temperature and  
pressure controls in single or  
double-pole models have di-  
rect-reading scale.

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AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, GAS APPLIANCES, PUMPS, AIR COMPRESSORS, ENGINES

**KRAMER**

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The Superior  
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Cooler

5 SIZES  
10,000 to 60,000  
BTU's

For EXTRA LARGE CAPACITIES

Ceiling mounted, you save valuable floor  
and storage space. Easier to install and  
service, too. Built-in Heat Exchanger.

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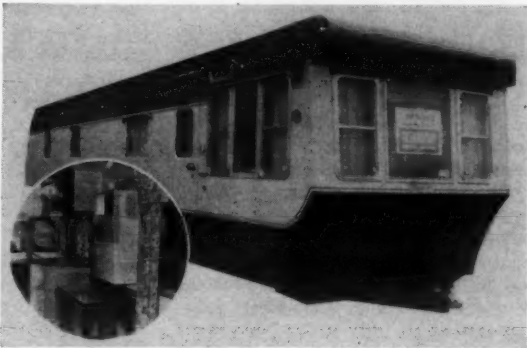




## AIR CONDITIONERS

### Air Conditioned Comfort In Home on Wheels

"LUXURIOUS LIVING ON WHEELS" has more and more become the motto of American trailer manufacturers. Completely synchronized with modern living trends, many mobile homes of today include air conditioning. Small wonder that the number of trailer enthusiasts increases substantially each season. Very shortly, what has grown to be a perennial American phenomenon will reoccur when large groups of trailerites begin their yearly migration to the warmer climes of the south. As they do, many will carry with them what appears to be the culmination of mobile living comfort—trailer air conditioning. Shown here is the Chrysler Airtemp casement window room air conditioner, popular because of the fact that when mounted it is entirely enclosed within the interior of the trailer and, therefore, requires no disassembling when moving time arrives. It is installed in a Richardson Mobile Home.



## Installing Room Conditioners

### Serviceman Should Put Unit In Right and Tell Customer Truth About Performance, Thompson Tells Engineers

WICHITA, Kan.—"Service is not a headache but the aspirin for the headache in the room air conditioner business," Roy Thompson, general service manager of O. A. Sutton Corp., told the Mid-West RSES association at its sixth annual educational conference here.

"About half of all the room air conditioners installed this year were oversold," he asserted. "The majority of units are sold on a square footage basis.

"You servicemen and installers are the only ones who can tell the customer what the unit will really do. You'll probably make the salesman mad when you tell the customer the truth, but you'll have to educate the salesman, too," Thompson declared.

"You owe it to the industry.

"I have letters from all over the country complaining about you servicemen knowing 'less' than the salesmen," Thompson stated wryly.

"Many complaints result from the serviceman installing the unit they way the customer wants it, instead of putting it in the way the serviceman knows it should go in to work properly," he said.

This is one of the results, he indicated, of the inexperienced and/or over-zealous salesman assuring the customer that his air conditioner will handle just about any kind of a load regardless of

how or where the unit is installed.

"You servicemen are the last contact with the customer," Thompson reminded them. "Be neat and courteous, and never leave the customer's home until you're satisfied that the customer knows exactly what she's bought.

"You servicemen are in a profession. We are just as important to the success of room air conditioners as any other factor in this industry," he asserted.

Thompson's presentation was greatly enlivened by an excellent skit staged by Roy Garrison and J. B. Jones of the Sutton service organization who showed how not to install a window air conditioner.

When they had completed the installation in this "take-off," which Thompson said was "somewhat exaggerated but unfortunately not too far from the truth in some cases," the unit was more or less balanced in the window, but drooping at an angle of 30°. It had been "carefully" sealed in the window and frame, however, with huge gobs of Permagum.

### UsAireco Declares Dividend

NEW YORK CITY—Directors of United States Air Conditioning Corp. at a meeting held here recently declared a dividend of \$1.75 per share on its preferred stock, payable Nov. 19, to holders of record Nov. 5.

## Airtemp Appoints Veith, Fitch Regional Managers

DAYTON—Appointment of Milton P. Veith as regional manager for the Chrysler Airtemp Detroit sales region and Warren Fitch as regional manager for the New Orleans sales region has been announced by J. F. Knoff, vice president in charge of sales.

Veith for the past five years has headed Chrysler Airtemp's New Orleans sales region. He joined the sales division of the firm originally in 1947, as district manager assigned to the Dallas area.

Veith is a graduate of Ferrell's Military Academy and Tulane university. In his new capacity he will direct the sale of Airtemp heating, residential, and commercial air conditioning equipment in the Detroit area. He succeeds P. J. Dalton who has resigned.

Fitch joined the sales staff of Airtemp in 1947. After serving in various sales capacities throughout the south, he was named Memphis, Tenn. district manager in 1952, the position he had held until his new appointment.

### Air-Cooled Motel Opens

SAN ANTONIO—San Antonio's newest tourist hotel, the \$250,000 Krosh-Al Motel, 530 Military Highway, S.E., contains 24 units in the main structure and a "honeymoon cottage," with all units having room air conditioners.

## Mitchell Distributors And Dealers Receive Protection Plan Checks

CHICAGO—Approximately 2,700 distributors and dealers of Mitchell room air conditioners are receiving checks for an average of \$130.80 each as a result of Mitchell Mfg. Co.'s Distributor Dealer Protection plan, it was announced recently by E. A. Tracey, vice president in charge of air conditioning division.

The per unit average was \$13.08, Tracey explained.

The DDP plan was set up late last year to compensate dealers and distributors, in part, for air conditioners left on their shelves at the end of the 1954 "season."

Under the plan, Mitchell set aside \$3 for each unit shipped to distributors and dealers between Nov. 1, 1953 and Aug. 31, 1954, regardless of the size or cost of the unit. The payments were determined by dividing the amount set aside in the DDP fund by the total number of units reported unsold on Sept. 15, 1954.

"The DDP program assures our distributors and dealers that we are supporting their sales activity with a realistic plan compensating them for carry-over inventory."

"Despite an unusually late summer over most of the country and the lack of a long, widespread hot spell until late in the season, our sales showed an increase of 30% for the season."

## Cory Appoints Cazel As Ad, Publicity Manager

CHICAGO—J. W. Alsdorf, president of Cory Corp., Chicago manufacturer of appliances, housewares, and air treatment appliances, has just announced the promotion of Lyle R. Cazel to the position of manager, advertising and publicity.



Cazel joined Cory three years ago and has since then supervised the preparation of all company printed promotion material and coordinated and supervised all phases of direct mail and cooperative advertising.

Prior to his association with Cory, Cazel headed the advertising department at the Culligan Zeolite Co., and was the assistant advertising and sales promotion manager for Century Metalcraft Corp. for five years. In addition, he was retail space representative for the former Chicago Downtown Shopping News.

### Appliance House Name Filed

BUFFALO—A business name has been filed in the Erie County Clerk's office for Appliance House, 1223 Genesee St., Buffalo, by Ann R. Betz and Michael Magrone.

AT THE VERY HEART  
OF FINE REPUTATIONS..

## AN EMERSON ELECTRIC MOTOR

The valuable extra you  
get with your  
Emerson-Electric motor

You probably know that the Emerson-Electric motor has helped to build more than one product reputation by its outstanding performance.

But are you aware that you can take advantage of the specialized experience and technical skill of Emerson-Electric Engineers and Designers on anything related to electric motors?

Often, a simple change in design or production technique can save you many dollars, deliver better performance for you. Remember, Emerson-Electric has specialists ready to help solve your most complex motor problems.

THE EMERSON ELECTRIC  
MANUFACTURING CO.  
St. Louis 21, Mo.



Write for information on this consulting service, or bulletins on Emerson-Electric's complete line of NEMA standard motors from 1/20 to 5 h. p. (Check Bulletin desired.)

- ☐ M449-A Capacitor-Start
- ☐ M449-B Split-Phase
- ☐ M449-C Integral
- ☐ M449-D Fan Duty
- ☐ M449-E Oil-Burner
- ☐ M449-F Jet Pump
- ☐ M449-G Blower

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30 YEARS OF AIR CONDITIONING

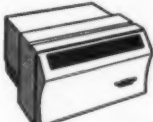
a complete "packaged"  
refrigerated air conditioning  
line



Packaged Air Conditioners  
2 to 15 h.p.



Home Unit  
2 to 10 h.p.



Packaged Central Station  
Air Conditioners  
3 to 60 h.p.

Fiberglass  
Window Units  
1/2, 3/4, 1 h.p.

UNITED STATES  
AIR CONDITIONING  
CORPORATION  
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MOTORS • FANS • APPLIANCES





## HOME & FARM FREEZERS



### Freezers Have Lost 'Fast Buck' Stigma, Are Steadily Gaining Volume, Survey Finds

(Concluded from Page 1)

freezer-food selling have declined substantially," the *Journal* said. It quoted a manufacturer's estimate that there were now only about 500 food plans in operation about the country as compared with some 2,000 several years ago.

A Deepfreeze official told the *Journal* that his firm now plans to "set up our own food plan department and try to police and control all phases of it." Ben-Hur Mfg. Co. recently opened a school at its plant to teach distributors how to sell on the food plan without using high pressure techniques.

#### 6,500,000 Freezers In Use

The paper said that there are now at least 6,500,000 home freezers in use in the United States, representing a saturation of about 15%. Manufacturers, it said, generally expect saturation to reach 70 or 80% eventually. Sales fore-

cast for this year is about 900,000 units as compared with 1,200,000 last year.

"Manufacturers blame the general business dip, plus a stabilization in their market after the initial boom" for the drop in sales, the *Journal* declared. It continued:

"A Frigidaire spokesman expects industry sales to show a 'continual slow growth, although it may be several years before industry sales exceed the top set in 1953.' However, the division's freezer sales are running about one-third ahead of a year ago. Top year for Frigidaire freezers was 1951.

"General Electric's home freezer sales this year will be 'about the same' as last year, a spokesman says, making both years 'not appreciably below' G-E's peak in 1950. International Harvester Co.'s freezer sales also are running about equal with a year ago.

"Walter A. Wendler, vice president of Amana, expects his firm's sales this year to top 1953 by 33% to 50%. Amana recently completed a \$3.5 million expansion and aims to capture one-fifth of industry freezer sales this year.

"Sales of Deepfreeze so far this year are about 25% under 1953. There has been some improvement since early spring but 'most of it has been based on price,' says an official."

#### Interest In Food Plans Grows

The *Journal* noted that frozen food locker operators are showing a growing interest in selling freezers on the food plan. It cited as an example the Oxford Frozen Food Center in Oxford, Pa., owned by Mrs. Kathryn Shelton. Mrs. Shelton told the paper:

"Today I serve five times as many home freezer as locker customers. Our list of home freezer food customers is growing all the time and I'm trying to get back some of my lockers for plant storage space. The lockers are becoming the 'storage dump' for more and more home freezers."

#### Locker Facilities Help

##### Boost Food Plan Customers

Locker operators feel that they have the edge over the supermarkets in catering to food plan customers because they have the low temperature storage facilities and the facilities for quick-freezing, aging, cutting, and packaging that

the supermarkets lack, the *Journal* noted.

Locker operators, it said, admit that the supermarkets could acquire these facilities but so far have showed little inclination to do so.

"In contrast," the paper declared, "there are about 10,850 locker plants with zero-degree capacity for 5.3 million lockers. This, plus the space in home freezers, adds up to 110 million to 115 million cu. ft. of zero space. . . . This is 40% of all the zero-degree holding space in the U. S.; the rest belongs mostly to meat warehouses and frozen food packers."

The American public's growing taste for frozen foods, the *Journal* indicated, is shown by the fact that commercial packers put up 3.4 billion pounds of frozen foods in 1953 and are expected to put up 4.5 billion pounds this year.

### New Amana Distributors In St. Louis, Lansing

AMANA, Iowa—Brown Supply Co., St. Louis, and Major Appliance Co., Lansing, Mich., have been named distributors for Amana freezers and room air conditioners, it was announced recently by E. L. Hinchliff, sales manager for Amana Refrigeration, Inc.

The St. Louis distributor will represent Amana in the south central territory, covering the eastern half of Missouri and southern Illinois markets.

Officers of Brown Supply are Norman S. Brown, president; P. L. Lessard, vice president; A. E. Wildt, secretary-treasurer; A. H. Brown, vice president; and J. V. Bruening, credit manager.

Major Appliance Co. will represent Amana in 27 counties in central Michigan, extending north from Lansing to Cheyebogan.

Officers of Major Appliance, located at 520 N. Larch, Lansing, are M. F. Cotes, president; J. G. Chapman, vice president, general manager, and treasurer; A. J. Shaffer, vice president and secretary; H. M. Lee, vice president and sales manager; R. Jackson, service manager; and Patricia Ryan, advertising department.

### G. A. Fitzgerald, Food Technologist, Returns From Mission to Iran

WESTPORT, Conn.—Gerald A. Fitzgerald, well-known food technologist, recently returned from two years as chief, Food Processing Branch, U. S. Operations Mission to Iran.

Formerly chief chemist, Birds Eye Laboratories, director of the Frozen Food Foundation, and consultant to food processing industries prior to his Point IV affiliation, he plans to return to the consulting field in product research, development, and quality control. He is a Founder Member of the Institute of Food Technologists.

### Deepfreeze Appoints Appliance Wholesalers

N. CHICAGO, Ill.—Appliance Wholesalers, Inc., Detroit, has been appointed distributor for Deepfreeze Appliance Div., Motor Products Corp., it has been announced by J. A. Rishel, Jr., general sales manager of Deepfreeze.

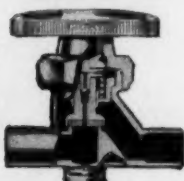
The firm's territory will cover the Detroit and Saginaw marketing areas. Founded in 1944, Appliance Wholesalers presently handles Sylvania radio and television and Apex home laundry franchises.

# HENRY

## LINE VALVES really give you something extra

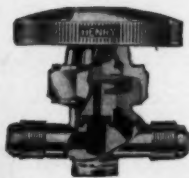
They give more dependable service because of advanced field-proven design and construction as well as patented features.

**PACKLESS VALVES**  
FOR FREON  
with Exclusive  
Balanced-Action



#### STANDARD TYPE

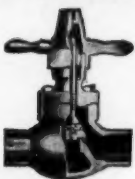
Ball check in balancing channel permits diaphragm inspection and replacement with valves under line pressure. Sizes, 1/4" thru 3/4" flare; 1/4" thru 1 1/2" O.D. Solder, 1/4" thru 1/2" F.P.T.



#### BLUE BANTAM TYPE

Same as standard Balanced-Action valve except that diaphragms cannot be inspected or replaced under line pressure. Size 1/4" thru 3/4" flare and O.D. Solder.

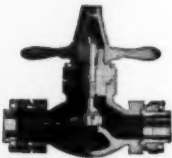
**PACKED VALVES**  
FOR FREON  
Bronze-Wing  
Cap Type



Globe and angle types with solder connections, bolted bonnets, sizes 3/8" thru 4 1/2" O.D.

#### SEMI-STEEL WING CAP TYPE

With bolted bonnets and square companion flanges. Furnished with brass tailpieces (O.D. Solder) 1 1/4" thru 5 1/4" or with steel tailpieces for welding to pipe, sizes 1 1/4" thru 5".



Also Globe and angle types with F.P.T. connections, sizes 1/2" thru 2".

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FOR AMMONIA  
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## Residential Air Conditioning

### 50-Year-Old Home Made Completely Comfortable

**\$10,000 Conversion Job Used One 5-Ton Water-Cooled System, 5 Window Air Conditioners; Customer's Restrictions Pose Unusual Problems**

PEORIA, Ill.—It's a rare day when an air conditioning contractor, with tongue in cheek, can tell a prospect it is going to cost her \$10,000 to \$12,000—"roughly"—to air condition her home and then hear her say:

"I didn't ask for an estimate. I asked for air conditioning."

A statement like that is bound to raise his competitive spirit.

Because, of course, there are strings attached—in the form of unusual problems by the bushel—many of them arbitrary and man made.

When Ellis Fritch of J. A. Fritch & Sons, General Electric heating and air conditioning dealer here, heard those words early last summer, he accepted the challenge wholeheartedly and embarked on what he terms a "most unusual and certainly enjoyable" experience.

#### FRANK LLOYD WRIGHT DESIGNED IT IN 1901

The job was to air condition a home built by Frank Lloyd Wright back in 1901. It was a two-story brick structure of spacious dimensions, very solidly built and incorporating architectural ideas that were far ahead of its time and in some respects comparable to contemporary practices, Fritch said.

The customer wanted the whole house cooled, BUT—she would not permit any ductwork or lines to run to the second floor. She would not give up any of her closet space to air conditioning. She had a fully decorated "amusement room" in the basement with murals on the walls that she did not want marred. And she wanted to keep the inside temperature at 75° F. or less regardless of outside temperature.

#### 12-IN.-THICK WALLS, NO INSULATION

In addition to that, Fritch discovered that the walls were 12 in. of solid brick with ½-in. furring. It was impossible to get through them. While the walls were not insulated, the house was well shaded, he said.

After carefully considering all the obstacles, Fritch solved his problems by installing a 5-ton

General Electric model FE-50 water-cooled air conditioning unit in the basement laundry room to cool the amusement room and ground floor. He put two ¾-hp. window air conditioners in the master bedroom plus one ¾-hp. window unit in each of the other three bedrooms all of which are located upstairs.

#### PLUMBING, ELECTRIC LINES REARRANGED

Installation of the 5-ton unit, Fritch commented, involved bringing in new water and electric service, extensive rearrangement of plumbing and sewage pipes, and cutting through a brick partition to run ductwork.

Ductwork was installed as high and flat as possible to avoid interference with the murals in the amusement room and ran the length of the house to serve G-E Air-Wall registers set in the baseboard of first floor rooms. The baseboard was the only possible place he could put the registers, Fritch noted.

Six registers were put in the 25 by 35-ft. living room alone, he said. Additional ones were placed in the 18 by 30-ft. dining room, 15 by 20-ft. front entrance lobby, and 12 by 25-ft. kitchen and breakfast room.

#### LOUVERED DOOR PERMITS AIR RETURN

The air velocity was stepped up and the air directed toward the ceiling, where it fans out and settles down over the room, Fritch said.

For return air, he louvered the basement stairway door and put a duct at the base of the stairs to pick up the air. Fritch engineered the system to use 75% return air and 25% fresh air.

The decision to use window air conditioners upstairs raised an additional problem. The windows were of the leaded glass type. Fritch found that there was no firm in Peoria that was capable of cutting this glass for installation of the units.

So he had to take out the entire windows and send them to Chicago to be expertly cut, a job which is taking considerable time. In the

interim he installed temporary windows and put the air conditioners in them.

Fritch said that while water is no problem at present, he arranged the water lines so that the waste water can be used for sprinkling the lawn if desired.

#### HOLDS 68°-70° TEMPERATURES

After the job was completed, Fritch said, he held his breath to see what would happen. But to date he hasn't had a single complaint from his customer. She likes to have the temperature down to 68 to 70° F. in the living room and she has been able to get it without any trouble. Temperatures throughout the house are quite even, he said.

The customer is particularly pleased, he added, because her husband is paralyzed, and the cooler temperatures make life much more comfortable for him.

#### Nine Makes Represented

### Wichita 'Parade of Homes' Features Air Conditioning; 24 Out of 32 Houses Have It

WICHITA, Kan.—Indicative of the sharp trend to residential air conditioning, 24 of the 32 new houses in the 1954 Wichita Parade of Homes are equipped with year-round systems.

Provision for the addition of cooling was also made in most of the other eight homes.

The "parade" went on view to the public recently.

Fifteen of the homes are located in a brand new development directly north of the Wichita university campus and comprise Research Village. All of these 15 homes are air conditioned.

One of the 15 is called Research House. It was built for the university through the combined efforts of the Wichita Association of Home Builders, whose more than 100 members donated most of the labor, and nearly 70 suppliers.

The remaining 14 homes in this project, however, were put up by individual builders in conformance to an over-all general pattern, and are intended for sale to the public.

The 17 homes not in Research Village are located in various sections of Wichita.

Nine different makes of air conditioning are represented in the 32 homes, and at least one instal-

lation of each of these makes is found in the 15 homes comprising Research Village.

Makes involved include Airtemp, Bryant, Carrier, Coleman, Day & Night, General Electric, Janitrol, Lennox, and Unarco.

### Gas-Operated Home Furnace Shipments Hit Four-Year High

NEW YORK CITY — August shipments of gas-operated home heating furnaces soared to a four-year peak of 69,800 units, according to the Gas Appliance Manufacturers Association.

The August total was the third largest in the industry's history. Only higher months were September and October, 1950.

Shipments in August, up 29% from the same month last year, raised the 1954 total to 369,800. This is 15.9% better than the like year-ago period.

August gas conversion burner shipments amounted to 28,200, a gain of 1.8% compared with August, 1953, but gas boiler shipments were off 7.4%.

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- A consistent program of powerful national advertising!
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Write to see how you can put all this to work making money for you.

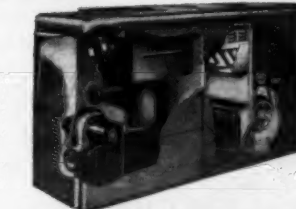


**Mueller Climatrol**  
2055P W. Oklahoma Ave. • Milwaukee 15, Wis.

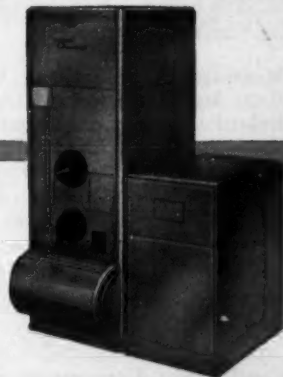
**Type 224-906 Companion Units**—For all-season air conditioning. The Type 224 heating unit is oil-fired (convertible to gas)—with 80,000, 100,000, 125,000, and 150,000 Btu input. The Type 906 cooling unit is available in 2-hp and 3-hp sizes—and can be installed with any winter air conditioner. Has own blower. Each size of the heating unit may be interchanged with either of the cooling models, for real flexibility.



**Type 900 Condensing Unit and Coil**—A compact unit of semi-hermetic design that can be installed in the duct system of any forced-air heating plant having sufficient blower capacity. 2, 3, 5, and 7½ hp.



**Type 916 Summer Air Conditioner**—For use with Types 116 and 216 winter air conditioners. By-pass damper arrangement provides utmost efficiency in any climate. 2 and 3 hp. Also available is the Type 901 Summer Air Conditioner for use with Type 105, gas-fired, and Type 202, oil-fired, winter air conditioners. 3, 5, and 7½ hp.



**Type 115-905 Counterflow Summer and Winter Air Conditioner**—Heating and cooling for perimeter systems, with horizontal or attic furnace, and other small-space applications. Furnace has adequate blower for both heating and cooling. Cooling unit contains complete enclosed refrigeration system. 2 and 3 hp.



**Type 903 Self-Contained Cooling Unit**—Can be installed with any new winter air-conditioning system—or added to existing systems. Contains complete enclosed refrigeration system in one compact package. 2, 3, and 5 hp.



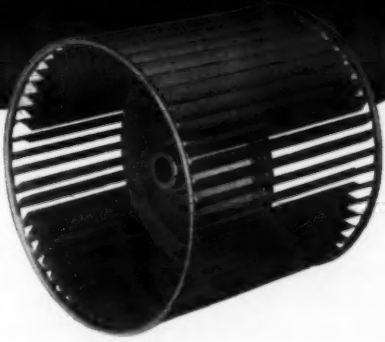
**Type 904 Self-Contained Cooling Unit**—For installation in stores, restaurants, etc.—or with duct systems in homes with radiator or radiant heat. Complete refrigeration system with blower and filters. Can be installed with steam coil for heating. Available with discharge grille, or can be used with duct-work. 2, 3, 5, and 7½ hp.



**Type 910 Recessed Summer Conditioner**—For cooling new and old homes, motels, apartments, office buildings, and homes with radiator heat. Installs under window between two standard studs. Air-cooled, requires no plumbing connections. ¾-hp and 1-hp sizes.

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NOVEMBER 1, 1954

## Problem for Engineers: Perfecting Air Conditioners

Air conditioning has captured public attention recently—probably much more than it deserves in terms of present engineering development.

It's obvious that the general public is buying outsized, noisy, ungainly air-cooling mechanisms at an accelerating rate.

Harsh statements? Yes: but true, from an engineering viewpoint.

Conscientious engineers in our industry advise us that packaged air conditioners should be lighter, quieter, and more efficient.

Salesmen agree. They add:

"Let's squeeze 'em."

What they mean is that housewives object to room coolers which bulge a home's carefully chosen draperies inside, and ugly the house outdoors.

All sorts of people object to outside room cooler overhanging, including politicians and pedestrians.

And nearly all humans—sleepers as well as neighbors—object to throaty fan noise. (It's easier to sleep when you're comfortably cool—unless the wheezing keeps you uncomfortably awake).

Another to-be-solved engineering problem regarding air conditioning revolves around the cost, and inconvenience, of installation.

Therefore:

Before it can attain mass-selling proportions, an air conditioner must become a plug-in device which can be installed without disrupting a household.

In that connection, our design-engineer friends suggest:

(1) Better balance of moving parts for quiet operation;

They'll Do It Every Time . . . . . Jimmy Hatlo



- (2) Higher capacity and output, especially at the fan level;
- (3) Cleaner, tighter, and drier condensing systems;
- (4) Lower costs all along the line;
- (5) More compact heat transfer surface;
- (6) Less resistance to air flow;
- (7) Totally silent fanning.

Engineering advances aren't the only hold-backs for air conditioning, however.

Public utilities should advance the pace of residential installations by providing polyphase transformers at no extra cost. Also, the slow-moving Underwriters Laboratory should "get on the ball" with deserved approvals of real good mechanisms.

And—most important of all—installers and servicemen need to be trained rapidly and thoroughly.

All in all, the fledgling air conditioning industry needs plenty of help from a frightening complex of angles before it will Come of Age.

## Let's Play Fair And Be Sensible

"The public has lost confidence in our industry," W. G. Peirce, Jr., president of Peirce-Phelps, Philadelphia distributor, inspires this editorial, "and it is up to us to bring that confidence back."

When Peirce made this statement, he was thinking about advertising practices which have misled purchasers until they quit believing what the dealer, distributor, and manufacturer were telling them about special, low—but false—prices.

That the public has quit believing, Peirce contends, is evidenced by the progressively poorer returns being made off this type of advertising. His remedy is a strong advertising code, administered by a stern Better Business Bureau with the voluntary cooperation of honest, right minded dealers.

Sadly brought to our attention the other day:

3,254 Indians, living on the Menominee reservation in northern Wisconsin, recently received a \$4,881,000 windfall from Uncle Sam as their share in a trust fund. That broke down to about \$1,500 per Indian.

Like almost everybody else with a loose \$1,500 in their pocket, the Indians went out to spend it. Many of them, attracted by the high-powered advertising turned out by the appliance industry, walked into dealers' stores and plunked their good money down on beautiful deluxe model electric refrigerators.

Dealers were only too happy to make delivery—ignoring a supposedly insignificant detail—there was no electricity in the Indians' homes.

What would an Indian—or anyone else—do with a deluxe model refrigerator with full width freezer, butter keeper, ice cube trays, and all other specialized appurtenances which manufacturers put into their expensive models these days if he has no electricity?

The report didn't say—beyond a statement that they used the refrigerators to hold ice.

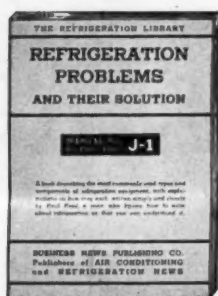
Our question: Why should any dealer interested in gaining or retaining the confidence of his customers sell a high-priced refrigerator to a customer who has no electricity and—apparently—no opportunity to get any "juice"?

Assume if you will, that the dealers who made these sales were not representative of appliance dealers in general. They might be considered a few bad apples in a barrel.

Where, we ask, is the integrity of the distributor and manufacturer who thought so much of THAT dumb idea that they sent the story out as a publicity release to the press?

We hope it was all a mistake. They can't be proud of the incident.

by PAUL REED



## REFRIGERATION PROBLEMS AND THEIR SOLUTION

Make it work! When you're stopped by a tough problem use these practical reference books with a load of factual information about every refrigeration problem you'll meet as a serviceman or salesman. For years Paul Reed has been supplying the answers in his weekly column in AIR CONDITIONING & REFRIGERATION NEWS.

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Measuring Temperature; What Heat Is; Temperature-Pressure Relationships; Components in the Compression Cycle; Expansion Valves and Their Properties; Capillary Tubes; Float Valves; Heat Exchangers; Oil-Refrigerant Mixtures; Control Settings; Air Circulation; Multiple Systems; etc.

### VOLUME 2

Condensers; Compressor Shaft Seals; Defrosting Evaporators; Compressor Oil; Charging Refrigerant; Humidity and Air Circulation; Carbon Dioxide; Use of Gauges; Trouble-Shoot-

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Lost Time and Short Cuts; Refrigerants and Tables; Mollier Chart; Two and Three Stage Compression; Leaks and Moisture; Electric Currents; Single and Three Phase Systems; Motor Troubles; etc.

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## Solenoid Valves

Two Types of Seats and UL Requirements Discussed Before Mid-West RSES by Tom Melville

WICHITA, Kan.—Some of the basic design requirements of solenoid valves were outlined for members of the Mid-West RSES association at its sixth annual educational conference here recently by Tom Melville, manager of the refrigeration division of A-P Controls Corp.

"Solenoid valves," Melville said, "are on the increase in refrigeration and air conditioning applications."

### TWO TYPES OF SEATS

"In general, two types of valve seats are employed in solenoids. Metal-to-metal seating, which means that both needle and seat are made of metal, is the most widely used type. Metal-to-metal seating does not give 100% close-off; that is, some gas or liquid may seep through the valve while it is in the closed position. However, this is no problem in most refrigeration and air conditioning applications.

"For positive close-off it is necessary to use a soft, resilient seating arrangement. Some type of resilient pad is employed instead of a needle," Melville explained.

A high degree of close-off can be obtained with metal-to-metal seats, however, by using matched sets of needle and seat which have been lapped together, he said.

### TEST FOR SEAT LEAKAGE

The test for seat leakage, as required by Underwriters' Laboratories, Melville said, is conducted along these lines:

"The valve inlet is connected to a hydraulic system using light oil or water. Hydraulic pressures of 1.5 times the maximum rated pressure of the valve is applied for a period of one minute, the valve being in a closed position with the outlet open.

"The UL general requirement is that there be no leakage, but this will vary with the application.

"On small solenoid valves, an impact type plunger is used to overcome the pressure differential across the valve. With this arrangement, the plunger is pulled up by the coil first, and on the way up it hits the shaft of the needle with a sharp impact, lifting the needle off the seat."

Discussing the matter of pressure differentials further, Melville reminded the group that "as you increase the orifice size of the valve, using the same size coil, the opening pressure differential drops considerably."

Citing a typical A-P solenoid valve, he said that with a  $\frac{3}{32}$ -in. orifice, the valve could open against a 275 p.s.i.g. pressure differential; with a  $\frac{1}{16}$ -in. orifice, the limit was 225 p.s.i.g.; with a  $\frac{3}{32}$ -in. orifice, 125 p.s.i.g.

"It's most important not to exceed rated pressure differentials in

selecting and applying solenoid valves," he cautioned. "Put on the solenoid that you're sure will open at the extreme pressure differentials you expect to find."

Another UL test imposed on solenoids, Melville explained, is a limitation on how high the temperature of the coil can rise when the valve is kept open for a prolonged time.

"In an ambient temperature of 77° F. with a Class A coil (classes of coils vary with the type of insulation used on the winding) the coil temperature can go up to 117° F. if measured with thermocouples, or up to 185° F. if tested with the resistance method. The latter measures the temperature within the winding itself.

"In practice, valves are designed for the maximum wattage value to prevent exceeding the allowable temperature rise of the coil," he said.

### OVER-VOLTAGE, UNDER-VOLTAGE TESTS MADE

"Over-voltage and under-voltage tests are also run by UL. Both a.c. and d.c. solenoid valves are required to operate without trouble at 10% above average voltage on over-voltage tests. A.c. valves must open at a 15% decrease in voltage while d.c. valves are required to open at 20% below average voltage. This means that an a.c. valve designed for 115-volt service must open even if the voltage falls to 98 volts.

"As a result of this requirement solenoid valves are usually rated at 85% of the normal voltage," Melville explained.

Dielectric tests conducted by UL check the insulation of the valve to make sure that no shorting or grounding can occur under normal use, he added.

### ENDURANCE TEST

"An endurance test is also required by UL. The testing agency says that a solenoid valve used with hazardous fluids, including refrigerants, must not stick or otherwise become inoperative for 100,000 operations.

"Generally a valve's expectancy is much longer than that. However, valves operating to control air or gas flow tend to have a shorter life than those controlling a fluid."

A fluid, Melville pointed out, gives more of a cushioning effect to the valve as it seats than does a gas.

Other tests which a solenoid valve must pass include those for external leaks; a hydrostatic or rupture test where the valve must withstand five times its rated pressure without bursting; a torque test of the valve body where the body is subjected to a torque of 40 ft.-lbs.

### BRASS, COPPER, BRONZE NOT SUITABLE FOR AMMONIA SYSTEM

Discussing valve construction in general, Melville explained that brass, copper, and bronze are not suitable for use in ammonia systems, that cadmium plated valves are not good for water.

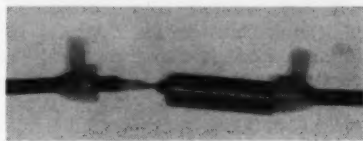
"Valves to be used for controlling brine or strong acids have to be specially investigated."

He also discussed briefly the use of pilots and semi-pilots on larger valves which let the pressure in the system help open the valve. These designs, he said, greatly reduce the opening pressure differential and thus let a very small coil operate a large valve.

"If a solenoid valve doesn't open when the coil is energized, burn-out will result. You have a high starting current which is reduced only when the plunger comes up into the center of the magnetic field to provide the inductance which cuts back the starting current."

## SLANTS ON SERVICE

"Slants on Service" is a "package" devised by the NEWS to meet the needs of its busy readers in the service and contracting business.



SECTIONS of plastic mold ready to be slipped in place over cable splice.

### Kit Permits Sealing Cable Splice In Resin

Sealing of cable splices in liquid resin can now be done quickly and easily in the field with a new method and materials developed by Minnesota Mining and Mfg. Co.

Liquid epoxy resin is poured around the cable splice in a plastic mold. It then hardens into a casting which is sealed from air and moisture.

Heretofore epoxy type resins have been used under factory controlled conditions for embedding coils and other electrical components.

For making splices Minnesota Mining has introduced a "Scotchcast" kit No. 82A. Each kit makes one complete splice and can be used for single conductor cable in wire sizes from 10 to 4.

Kit consists of a supply of



LIQUID resin is poured from plastic mixing envelope into spout of mold.

"Scotchcast" resin and hardener in the "Unipak" container; a three-piece vinyl plastic single-use mold; two different-sized "Scotchlok" electrical spring-connectors; a strip of abrasive cloth for cleaning the conductor; and, an instruction sheet.

In use, the mold pieces are slipped on the ends of the wire, the insulation penciled down, and the spring connector turned on with the fingers. After pulling the plastic mold units into place over the connection, the inner partition in the "Unipak" container is ruptured by squeezing, and the resin and hardener thoroughly mixed by simply kneading the contents.

When the resin assumes a uniform color, a corner is snipped off the envelope and the activated

resin poured into one of the spouts on the mold. The resin sets up within five to 15 minutes, depending on the temperature. The plastic mold is left in place, since it provides added protection. The entire operation takes from 10 to 20 minutes and backfilling may begin immediately after pouring.

Average properties of the "Scotchcast" resin No. 4 used in the kit include a dielectric strength of 800 volts per mil thickness in 10 mil films; an electrolytic corrosion factor of 1.0; a dielectric constant and dissipation factor at 30 degrees C. of 7.2 and .019, respectively; and, good resistance to water, oil, and solvents. The material is self-extinguishing.

### Pick Benjamin To Head General Controls Branch

GLENDALE, Calif. — General Controls Co. has appointed Thayer Benjamin as manager of the company's branch office in Salt Lake City.

Benjamin, formerly with Boeing Airplane Co., has been with General Controls for several years, most recently in the Los Angeles city sales office. Territory covered by Benjamin includes Utah, Idaho, and Montana.

Thayer Benjamin

# new

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**HOW IT OPERATES:** Modulating feature limits suction pressure at compressor to recommended or desirable maximum for the condensing unit motor. At conditions of overload, valve modulates to prevent suction gas pressures at the compressor inlet rising above that for which the valve is adjusted. When overload condition has passed and suction pressures drop below valve setting, valve automatically assumes wide-open position during remainder of cycle, or until another overload condition is encountered.

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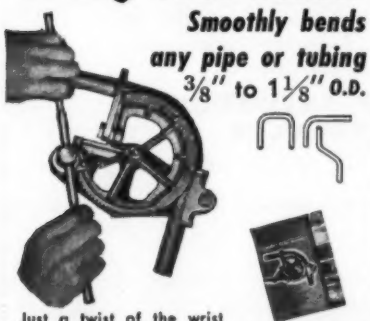
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## Commercial Refrigeration



LARGE FAN IN CEILING sucks heat of compressors up a shaft where in summer it is exhausted outdoors but in winter is diverted to heat an upstairs storage room. Drop doors behind compressors expose outside air vents in summer, close them off in winter. This is a little "extra" that Ray Pennington of Springfield, Ill. offers to his supermarket customers.

### By Means of Suction

## Heat from Battery of Compressors Warms Storage Room During Winter at No Cost

SPRINGFIELD, Ill.—Heat given off by a battery of refrigeration compressors warms the unheated second floor storage area of the Public Super Market here to a comfortable 50° F. during the winter months.

This is accomplished by a simple arrangement devised by Ray Pennington, Hussmann commercial refrigeration dealer here, who installed the refrigeration equipment.

Pennington placed the compressors in a small room at the rear of the ground floor of the market. The compressors are lined against the outside wall. Directly behind them are screened openings to the outside. In the ceiling is a huge suction fan. Above the fan, a large air shaft leads to the roof.

During summer operation, vertically sliding doors are raised, exposing the screened openings. The

fan draws outside air over the compressors and exhausts the hot air up the shaft and to the outdoors.

But in winter, the doors are dropped, closing off the outside air. One side of the wooden air shaft swings diagonally across the shaft, blocking off the opening to the roof. The door to the compressor room is left open.

The hot air from the compressors is drawn up through the shaft, but now it is exhausted into the storage area, giving the stockmen a comfortable place in which to work without any extra cost for heating.

Pennington commented that this arrangement is a little extra that he has put into 17 markets to date to the satisfaction of the owners.

### Biggest Super in Memphis

MEMPHIS—Montesi Super Market No. 4, described as the largest in the city, has opened at 973 S. Third St. Completely air conditioned, it provides almost 20,000 sq. ft. of floor space.

## Du Pont To Construct 'Freon' Plant In Canada

MONTREAL, Que., Can.—A plant for the manufacture of "Freon" fluorinated hydrocarbons will be erected immediately at Maitland, Ont., by Du Pont Co. of Canada, Ltd., it was announced recently.

Maitland is on the St. Lawrence river between Brockville and Prescott.

The plant will be of sufficient capacity to fill all Canadian requirements for these chemicals, now largely imported from the United States, and will use Canadian base materials wherever possible, the company said. It is being built adjacent to Du Pont of Canada's nylon intermediates plant which went into production a year ago.

The project is the second announced by Du Pont of Canada since July. The first building of a research center already is under construction at Kingston, Ont., beside the company's nylon spinning plant there.

## Over 100 Attend Meeting Of Southern RSES Assn.

MOBILE, Ala.—More than 100 persons turned out for the two-day semiannual meeting of the Southern Regional Association of Refrigeration Service Engineers Society chapters, held recently at Hotel Admiral Semmes here.

Educational program speakers and their subjects were:

Roy S. Trafton, Alco Valve Co.—back pressure regulators and valves; Edward F. Ford, Bell & Gossett Co.—pumps for cooling towers; Otto T. Nussbaum, Kramer Trenton Co.—"Unicons" (air-cooled condensers); Herchel R. Coile, Minneapolis-Honeywell Regulator Co.—application of winter-summer air conditioning controls; and Dr. Edgar S. Ross, Sun Oil Co.—refrigerant oils.

## Wellnitz Directs Perfex Service Education Program

MILWAUKEE—Harold Wellnitz has been named national director of service education for Perfex Corp., the company announced recently.

Experienced in the handling of service schools and educational programs, he will take charge of Perfex' dealer education program for servicemen.

### Cool College

BIRMINGHAM, Ala.—The new Alvenson-Draughon college, the only air conditioned business college in Birmingham, opened recently.

## National Sanitation Foundation Broadens Its 'Food Service Equipment' Standard

ANN ARBOR, Mich.—The National Sanitation Foundation has recently broadened its Standard No. 2, "Food Service Equipment," to cover such items as utensils, walk-in refrigerator shelving and other structural items, deep-drawn messtrays, and iced-tea cannisters, the Foundation announced recently.

In addition, the Foundation's joint committee on food equipment standards has recommended that the testing laboratory be authorized to accept for testing for sanitation and public health safety any device which may, in the opinion of the director, affect the health of the public.

A news letter published by the Foundation noted that the state of Illinois has now officially written into its public health and sanitation codes regulations requiring that all new food service equipment installed within the state comply with the NSF sanitation standards drawn up jointly by health and industry committees.

It said Davidson County, Tenn. has made similar provisions in its regulations.

"Effective Sept. 1, 1954, the coverage of this standard is broadened to include such equipment. In accordance with standard procedures additions will be made to this standard to cover details of special equipment as may be necessary."

### MANY ITEMS NOT COVERED

In recommending that the testing laboratory accept any device affecting the health of the public, the joint committee noted that many special devices or mechanical gadgets of public-health significance in the food field do not now specifically fall within the scope of any of the three NSF standards published to date.

The recommendation was made to bring these devices within the testing and seal-of-approval programs.

A standardized procedure is being set up whereby protocols and the results of tests may be reviewed by the joint committee and the council of public health consultants as a basis for determining acceptance of the product.

## J. Vincent Jamison, Jr., Industry Pioneer, Dies

HAGERSTOWN, Md.—J. Vincent Jamison, Jr., chairman of the board of Jamison Cold Storage Door Co., died recently at his home here. He was 69 years old.

Since his start in business shortly after the turn of the century, Jamison became one of the foremost leaders in the refrigeration industry. He was responsible not only for industry-wide advances in the design of cold storage doors, but in recent years also fostered the development of sound reduction doors.

Jamison, with his father, R. E. Jones, and eight others, was co-founder of Jones Cold Storage Door Co. in Hagerstown. In 1914 the name of this firm was changed to Jamison Cold Storage Door Co.

Jamison was manager of the company, then secretary-treasurer, and finally general manager. He was elected president in 1921 and continued in this office until his appointment as chairman of the board in 1941. He was the oldest member of the company's 30-year club.

Jamison was a lifetime member of the American Society of Refrigerating Engineers. He was also quite active in organized baseball, community life, and politics.

## Refrigeration Fundamentals

### Newest Master Service Manual

Latest vital information for every beginner in refrigeration. Gives the expert a handy, pocket-size reference on important facts. Seventy-eight illustrations, 17 tables in this 112-page book give you the facts quickly and easily.

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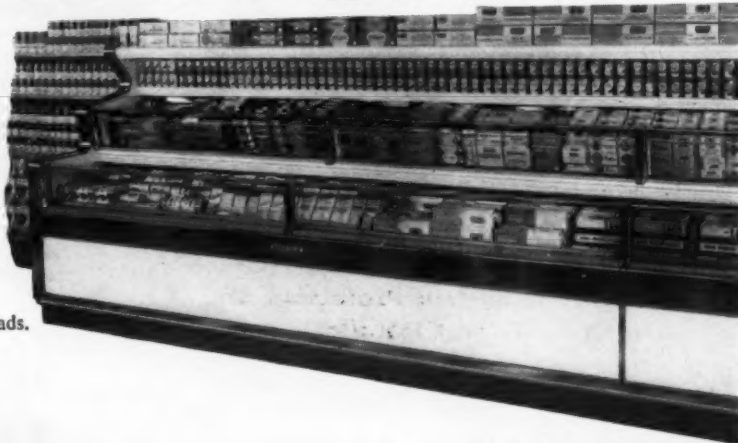


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72 qt. cartons or 49 doz. eggs per lineal foot!

### A SUPER SALESMAN FOR DAIRY PRODUCTS!

The two-decker Super Merchandiser is new... yet its money-making merits are already proved in significant independents and a number of the country's largest chains. Its capacity is terrific! 49 dozen eggs or 72 quart cartons of milk per lineal foot on the lower display deck, yet the upper deck for impulse sales is easily accessible—has adjustments, too, for heavy and light loads. Write now for complete details.



DD installation with 58" Merchandising Canopy is shown. Also available with 69" Merchandising Canopy with vertical mirror. 8- & 11-ft. lengths in beautiful, profitable multi-case construction.

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## What's New

When requesting further information on new products, please use "Information Center" form.



### Warren Offers Color In 3-Decker Dairy Case

—KEY NO. D-1110—

ATLANTA—Growing popularity of its three-decker dairy refrigerator is reported by The Warren Co.

The company devised this refrigerator last spring as an answer to "the need of large-volume merchants for an open dairy case that would hold a sufficient quantity of eggs and milk so that the store personnel would not be continually interfering with the shopping traffic by having to restock these two fast-moving dairy staples," it was pointed out.

"Although this fixture was in use at the time, it had its first showing at the Super Market Institute Convention in Cleveland in May.

Warren also manufactures another multiple-deck dairy refrigerator, which accommodates a more-typical lower quantity of product.

"This new large-volume dairy refrigerator is in addition to Warren's 'Super Merchandiser' line," the company said. "It has the capacity for 49 dozen eggs or 72 quart cartons of milk (double decked) per lineal foot on the lower display deck—all within the definite confines of the refrigerated area without over loading.

"Yet, the center deck is easily accessible for impulse sales of other refrigerated dairy products, with two shelf adjustments for good displays with heavy or light loading.

"The third deck is non-refrigerated—available in two styles, one bringing the over-all height to 58 in. and one, with vertical mirror, to 69 in.

"These fluorescent-lighted merchandising decks flood the refrigerated impulse shelf with full illumination for fast turnover of high-profit refrigerated and non-refrigerated dairy items. The top of the 58-in. style can be further utilized for merchandising associated items."

At three important national conventions in 1954—those of the Super Market Institute, National Association of Retail Grocers, and National Association of Food Chains—Warren has exhibited Super Merchandisers "in beautiful decorator colors," the company noted.

"Warren has enjoyed many complete-store installations featuring colored porcelain all over the United States and in Canada," the company added.

### Pressurized Oiler Has Safety Relief Valve

—KEY NO. D-1111—

PITTSBURGH—Incorporating a safety relief valve to insure against overfilling, a pressurized oiler for adding oil to inaccessible compressor crankcases has been introduced by the Superior Valve & Fittings Co. here.

The oiler will add oil to conventional compressors and also those that have individual design and create special problems. In addition, it is designed to remove dirty oil and sludge where no drain plug is provided.

For ease of filling and operation, two Superior valves are incorporated in the basic design. They are a 1/4-in. flare by 1/4-in. pipe thread receiver-discharge valve with a 12-in. dip tube and a charging valve with a safety mechanism in case of overcharging. A 36-in. charging hose with quick couplers fitted to each end carries either the pressure charge or the oil.

The oiler weighs 5 lbs. net and is 14 1/2 in. high. Of all brass construction, it has a capacity of 3 pints.

The pressurized oiler, catalog No. 5848, is stocked by refrigeration parts wholesalers.

### Thor Wringer Washer Has 'New Low Price'

—KEY NO. D-1112—

CHICAGO—Thor Corp. has introduced a new wringer washer, model 552, at a "new low price"—\$129.50 without the Thor "Electro-Rinse" mechanism and \$139.50 with the mechanism.

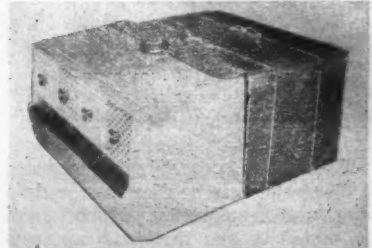
Electro-Rinse is a high-speed, non-clogging pump operated by the washer motor, which allows the operator to wash and rinse without the use of additional rinse tubs, the company said.

The model 552 features the 9-vane "super" agitator of black Bakelite design. The all-porcelain tube has white porcelain finish on Bonderized steel. The washer has a 9-lb. dry clothes washing capacity and a 19-gal. water capacity.

### Air Conditioner Cover Made of Light Plastic

—KEY NO. D-1113—

NEW YORK CITY—An air conditioner cover made out of .012 gauge plastic material and which is claimed to withstand tempera-



tures of -20° F. has been introduced by the Blossom Mfg. Co., Inc. here.

The cover is said to fit every known air conditioner on the market. It is individually boxed. Cords used in the manufacture of these covers are 100% nylon.

The covers retail at \$4.98.



"Typhoon is the most co-operative outfit in the business," says Carl Muno, McCarty Bros. Equipment Corp., Chicago.

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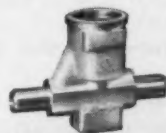
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# COOLING TOWER DESIGN, APPLICATION

## Selecting Equipment Which Meets Customer, Engineering Requirements

This is the second instalment of a discussion on cooling tower design and application which was presented before the sixth annual conference of the Mid-West-RSES association in Wichita, Kan. by O. L. Michael of Santa Fe Tank & Tower Co., Inc. The first instalment appeared in the Oct. 25 issue of the NEWS.

"In most cooling towers the problem of evenly distributing the circulating water over the large tower area is solved by spraying water from a number of evenly distributed, discrete points, each covering a specific area. The method of spraying may be different. Each discrete distributing point may be replaced by a spray nozzle under pressure atomizing the water, or it may perform by a tube discharging water as a jet which impinges on a splash plate where the drops are formed and spread over the respective area. In both cases the essential object of spraying is distribution.

"The tank of the distribution system now is to provide each discrete distributing point with its corresponding quantity of circulating water. Since all the circulating water arrives at a single flange of the whole tower, or of each cell separately, depending on the pipe

layout, the distribution of this water involves a branching off system of pipes or troughs until each distributing point is reached.

"Since the system of pipes or troughs is located inside of the working space of the tower, there are limitations in its design as to velocities and dimensions, as otherwise the free flow of air through the tower would be throttled by it.

### Limiting Throttling Effect

"Now, if one wants to limit this throttling effect, it is necessary to employ high water velocities in the piping system with correspondingly reduced pipe dimensions. Under such conditions the only way to achieve even water quantity at each distributing point is to employ a piping system under more or less high pressure. Then the ratio of the pressure loss in the piping system to the total pressure will be small and the variation of water quantities between the distributing points will be held to a minimum.

"In the usual tower design air enters from the side and must make a sharp 90° turn in a space partially filled with fill decks and through which a heavy rain pours downwards, before it can distribute itself over the tower area and

flow upwards in countercurrent to the falling water. Obviously the chances of even distribution at the end of the turn are not too good.

"Higher up equalization will take place and, peculiarly enough, the pressure drop represented by the spray eliminators contributes to this equalization. Considering that the pressure drop through the spray eliminators is completely wasted, as far as performance is concerned, it is gratifying that if spray eliminators have to be used, they at least partially contribute something useful to the performance.

### Getting Better Distribution of Air

"Better air distribution would be achieved if the turning space were free of fill decks and the number of fill decks would be decreasing in depth in order to equalize pressure drops. From a theoretical standpoint such arrangement would be correct; from an economic, that is engineering, standpoint, it is questionable whether the value of the improvement would balance the additional cost of the higher tower and the higher pumping head.

"Considerable velocity equalization in sharp turns is achieved by the use of turning vanes so fre-

quently employed in ductwork. They can equally do useful work in the entrance turn of cooling towers and their usefulness is heightened if these diverter baffles are made adjustable and their position fixed after erection with the aid of air velocity measurements," Michael said.

### Fill Has Twofold Role

"A large percentage of the capital investment in cooling towers is in the fill. It is responsible for the creating of the total surface drop and film surface, through which heat exchange by conduction and evaporation takes place and, therefore, essentially determines the performance of the tower. The role of the fill is twofold:

"(a) It must stop the drops in their fall through the tower at intervals imposed by the design in order to increase the time of fall of a drop and thus increase the total number of drops within the tower, and so the total drop surface.

"(b) It must provide a large material surface over which the water can spread in a thin film thus adding film surface to the heat exchange.

"In order to fulfill the first requirement it is evident that the fill, within the height of the tower assigned as complete fall, must be so arranged that if its shapes are projected on a horizontal plane they form a solid deck through which no drop can pass.

### Blowdown Required on All Cooling Towers

"All cooling towers require blowdown, that is withdrawing a quantity of circulating water and running it to waste in order to hold the concentration of dissolved solids in the circulating water to a desired minimum. The amount of blowdown depends on the chemical characteristics of the make-up water, but however small this quantity, it will always be larger than the quantity of drift losses even if no drift eliminators are employed. And since it makes no difference from what point of the system water is withdrawn, the drift losses can be considered as part of the blowdown and therefore do not represent a water loss.

"If still drift eliminators are specified it is only because the drift loss represents a nuisance to be reduced to a minimum. The

drift loss guarantee by the cooling tower manufacturer simply represents a measure of the degree of nuisance.

"The discharge of water droplets by the tower into the surroundings can be troublesome. If outside equipment receives a continuous rain of tower drops and the water of the drops evaporates there is left a salt spot resulting in the characteristic salt spot corrosion. Complaints must be considered from nearby properties and the need for reducing this nuisance must be considered as an economic necessity. The price paid for this reduction is quite heavy.

"The first cost of the drift eliminators is not negligible by any means and the pressure drop through the eliminators may be responsible for as much as 20% of the total fan power requirements. An exact economic evaluation of nuisance is, of course, impossible, but if nuisance is not involved, if a tower is located in midst of an empty field, for example, the drift eliminators should not be specified," Michael suggested.

### Drift Eliminator Design

"Various designs are employed for drift elimination and the degree of elimination depends of course on how much pressure drop and power one is willing to spend. Usually a two-course eliminator at 90° angle will be sufficient to accomplish the desired result. Sometimes three courses with smaller slots are used. The difference in performance between them is hardly noticeable and as far as their pressure drops are concerned, it shows itself up in the figure of total fan power given by the manufacturer.

"Of the mechanical equipment, consisting of fan, gear, transmission, couplings, and driving motors, (Continued on next page)



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figuring heat gain; air through cooling coils; selection of cooling coils, expansion valves, compressors, and water cooling coils.

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## Cooling Tower Design, Application--

(Continued from preceding page) only the fan offers design problems peculiar to and connected with cooling towers. The other equipment can be considered as standard mechanical equipment applied to cooling tower operation.

"Cooling towers require large volumes of air which the fans have to deliver against rather low total heads. The total head consists of the static pressure to be overcome and the velocity head which is the energy in a pound of air at the discharge.

### Propeller Fan Required

"These requirements classify the cooling tower fan immediately as a propeller fan. Large volumes of air demand large fan diameters, low total heads require low tip speeds, and in order to get a reasonable r.p.m. one must select the type of design that can produce low heads at maximum tip speeds, and that is the propeller.

"The fan blades can produce the total head in any desired ratio of static to velocity heads, and in general fan design it is found that employing large axial velocities not only reduces the fan diameter, but increases the efficiency based on the total head. The excess axial velocity produced by the blades is then converted into pressure by means of diffusers.

"This method of design cannot be employed in cooling tower fans simply because with the very large dimensions involved it is not economically possible to employ diffusers in cooling towers. And since the energy contained in the exhaust air is completely wasted and

does not contribute in any way to the cooling tower performance, it must be held to reasonable figures.

"The cooling tower fan, therefore, must be designed with low axial velocities resulting in large fan diameters. Large fan diameters in standard materials mean large weights, and large weights are economically excluded from cooling tower application.

"It is not only that large weights are difficult to handle in the erection, and load the bearings of the gears excessively, gears which due to the small total heads produced have to transmit a small energy relation to the very large fans. There is a more important reason.

### Fans Must Be Started Across the Line

"Cooling tower fans must be started across the line in order to eliminate the use of expensive starting equipment. And since standard motors are designed for a limited maximum starting current, the moment of inertia of the fan determined by the distribution of mass to be accelerated to full speed, must be sufficiently low so as not to exceed the starting torque and starting current imposed by the motor.

"The moment of inertia depends particularly on the location of mass from the axis of rotation and so it is the fan blades which must be made of low weight, whereas the hub near the center can be heavier.

"It is a requirement of blade design to have an equal pressure distribution from hub to tip. Since pressure generation depends on circumferential speed and this speed is continuously decreasing from tip to hub, the change in speed must be made up by increasing correspondingly the blade width and particularly the blade angle of the air foil sections that produce the lift.

### Backflow Problem

"There is, however, a limit to which the angle of approach can be increased. At a certain maximum angle instability of flow sets in, the so-called 'stalling point' of the air foil is reached, and the lift begins to drop sharply with increasing angles of approach. This critical angle limits further reduction in tip speed and determines the minimum hub diameter of the fan. Reducing the hub further, the necessary pressure cannot be generated and backflow occurs.

"Backflow is a parasitic circular flow of air that takes power without contributing to the tower performance. Another requirement of a well designed cooling tower fan is equal velocity distribution over the fan blade. Since the energy contained in the exhaust is proportional to the square of the velocity, even velocity distribution for the same volume of air will represent the minimum energy loss.

"Cooling tower fans should have adjustable pitch of the blades, even for the sole reason to enable to set the blades after erection to the specified power. Gain in power savings by blade adjustment for winter operation will depend on the type of plant the cooling tower is serving. In power plants the savings in fan power will merely balance the losses in turbine capability; in other plants cold water temperatures below a certain point do not contribute to plant efficiency and blade adjustment is desirable.

### Sound Problem

"In most industrial installations the sound produced by the cooling tower consisting of the sounds of the falling water, the fans and the rest of the mechanical equipment is of no concern. But cooling towers employed in the air conditioning industry and usually installed on the roofs of buildings and surrounded by other occupied buildings, apartment houses, etc., may produce sounds objectionable to their occupants and may lead to costly controversies.

"The reduction of noise in such types of installations is necessary. But the question is how far can the noise level of a cooling tower installation be reduced? The noise level produced by the falling water is beyond control. The noise level produced by the mechanical equipment of which the fan noise is predominant can be controlled by specially designed fans of high rigidity, low air velocity, and low tip speeds," Michael said.

"It is important in this respect to consider the psychological fact that when two sounds occur simultaneously, the louder sound becomes the predominant sound. In other words, there is no use to reduce the sound level of the fan below the background sound level. And the background sound level in the worst case is that of the falling water. In most cases a rise above the background level will be permitted and specified.

### Noise Specifications Given In Decibels

"Noise specifications are given in decibels as measured by the flat scale of the sound meter. On this scale the decibel is not a measure of the actual physiological effect of sound, but a physical measurement expressing the common logarithm of the ratio of the sound intensity to the intensity of a standard sound selected at the threshold of hearing. One decibel is one-tenth of one bel. One bel indicates an amplification by 10 (common logarithm of 10 being 1). Similarly two bels, or 20 decibels means amplification by 100; 30 decibels by 1,000, etc.

"As stated, decibel figures on the flat scale measure physical sound energy which is different from the physiological loudness effect of the same sound on the average ear. The response of the human ear to sound intensities is approximately, but not exactly, logarithmic, and this is the reason for the logarithmic decibel scale. But the loudness effect of a sound of given intensity also depends on the frequency of pitch of the sound.

"To measure loudness, a reference tone of a single frequency of 1,000 cycles per second has been adapted and the loudness level of any sound is determined by the physical intensity in decibels of the equally loud reference tone as it



appears to the average ear. This loudness scale is the weighted scale and both flat and weighted scales are provided in the usual decibel machine.

"The difference between both scales for the same sound can be large, especially for tones of extreme pitch, or for very faint sounds.

"The majority of machine noises and other noises encountered in everyday life belong in the middle range, both as to intensity and frequency, and the difference between the two scales will not be too pronounced. In cooling tower work noise guarantees are always based on the flat scale measuring the intensity of the sound.

### Familiar Sounds Rated

"The few figures in the following table may be useful in helping to evaluate decibel readings with familiar sounds:

	Decibels
Average residence .....	38
Maximum residence .....	50
Average restaurant .....	70
General office .....	60
Average busy street .....	75-85
Average auto horn at 50 ft. ...	87
In Pullman train .....	65
Streetcar (from street) ....	83
Elevated train (from street) .	90
Subway (in car) .....	100
In passenger auto (50 m.p.h.)	72
Riveting (from across street)	92
Cooling tower (without fans)	72

(To Be Continued)

### To Cool New P & G Bldg.

CINCINNATI—Construction of Proctor & Gamble Co.'s air conditioned 11-story downtown headquarters building, to cost in excess of \$5,000,000, is scheduled to begin in February.

## Typhoon Names Masiello Assistant Sales Manager



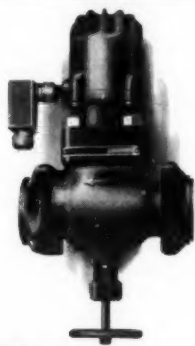
A. G. Masiello

BROOKLYN—A. G. Masiello, previously with Remington Corp., has been appointed to the newly created post of assistant sales manager for the Typhoon Air Conditioning Co., Inc., it was announced by Mark E. Mooney, vice president in charge of sales. A native New Yorker, Masiello was assistant to the general sales manager at Remington. He spearheaded the establishment of the company's coast-to-coast distribution setup. Later, he served the company as field manager for the eastern seaboard.

Prior to his association with Remington, he spent 12 years with Carrier Corp. in a number of capacities, the last being manager of self-contained equipment for the Philadelphia and Cleveland districts.

According to Mooney, the creation of the assistant sales manager position is a result of the recent increase in the number of Typhoon dealers, and the general increase in Typhoon sales over the 1953-54 season, especially in residential units.

Under the new setup, Typhoon's policy of closest possible contact and cooperation with dealers can be effectively maintained, through Masiello, while allowing Mooney more time to devote to executive functions, Mooney explained.



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Low Pressure Drop	yes	yes	yes	no
Absorbs Water Physically instead of Chemically	yes	no	yes	yes
Non-dusting	yes	no	no	yes
Absorbs Acids	yes	no	yes	yes
Will dry Freon 12 to below 2 ppm at 120°F	yes	no	yes	yes

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## Refrigeration Problems and their solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

### Replacing the Motor-Compressor(2)

Last week we mentioned four methods by which a new or rebuilt motor-compressor could be connected into a hermetic system after the old, inoperative one had been removed. We briefly covered the main points to observe in silver soldering; but of course, in practice, it is not as easy to make a good silver soldered joint as it sounds on paper. Nevertheless, a good mechanic, especially one who has acquired the knack of soldering with soft solder, can, with a little practice, soon become proficient in silver soldering (more properly called silver alloy brazing).

#### USE OF FITTINGS

At least one manufacturer who permits and recommends changing components, such as motor-com-

pressors, in the field instead of changing the entire hermetic unit, specifies the use of fittings when installing the replacement motor-compressor. The fittings that this manufacturer specifies are somewhat special, but standard flared tube unions and nuts can be used.

The advantages of the use of fittings instead of soldering with any type of solder are simplicity, less mess on the job, and less risk of scaling at the joint, or of crystallizing the metal. By using fittings, the new compressor can be installed quickly and with a clean job.

On the other hand, there is more chance of the fittings working loose and causing a leak than there is of leakage at a properly soldered joint—especially a silver soldered joint. Flares sometimes crack or nuts may work loose, allowing a leak at the joint, so some manufacturers feel that they cannot trust the permanent tightness of a connection made with fittings as much as made with silver solder.

One thing that favors fittings for replacing a motor-compressor is that neither of the two joints is exposed to frost. There might be occasional flashes of frost-back to the joint between the suction line and the motor-compressor, but probably not enough to cause any serious trouble with frost loosening the flared tube nuts; and, of course, it is difficult to imagine any frost condition at the joint between the motor-compressor and the condenser.

Vibration might conceivably cause the fittings to loosen and the joint to leak, but the company that specifies the use of fittings when reconnecting the replacement motor-compressor reports that this method has proven quite dependable and that they have had very little leak trouble.

#### USE OF 95-5

Strictly speaking, the term "Hard Solder" should probably be used in connection with silver soldering; that is, silver alloy braz-

ing. However, this term is frequently used in the field to refer to 95-5 (95% tin, 5% antimony) solder, to distinguish it from the lead base solders, 50-50, 60-40, etc.

Admittedly, 95-5 is not as hard as silver solder, nor does it make as strong a joint. Moreover, more care must be exercised in avoiding a "sloppy" fit of the two tubes with 95-5 than with silver solder.

But 95-5 does make a good, permanent, leak-proof joint. The author knows of dozens of installations put in as long as 20 years ago using 95-5 that have given little or no trouble from leaks at the 95-5 soldered joints. This subject was covered in the July 12 and 19, 1954 issues of this column.

We have recently talked to men who have been using 95-5 to make the connections for the replacement motor-compressor if the tubing is copper. One man has used this method for 10 years and finds it quite satisfactory; another for about eight years. These men use silver solder brazing only when one or more of the tubes are of steel.

With 95-5 the joint does not have to be heated to 1,100°, for 95-5 requires a temperature of only 465° to flow. At this temperature there is little or no scaling of the joint inside or out, and that is a very definite advantage in making the tubing joints when replacing a motor-compressor or other component of a hermetic system.

#### LEAD BASE SOLDER NOT RECOMMENDED

There seems to be rather general agreement that the "soft solders," that is, the lead base solders such as 50-50 should not be used, although occasionally an "old-timer" will insist that he can make a good tight, permanent joint with 50-50.

However, the joint made with a lead base solder is structurally not very strong, and will not stand much vibration. Also, it is more subject to leaks due to electrolytic or chemical action showing up after a period of time. Finally, there is a possibility of the lead solder softening, especially in joints between the compressor discharge and the condenser. There would be a very good possibility of this happening on systems charged with "Freon-22" (or Genetron-141), whose discharge temperature is higher than that of "Freon-12" (or Genetron-12).

#### EXCHANGING BURNED OUT MOTOR-COMPRESSORS

Regardless of whether the joints are made with silver solder, fittings, or 95-5, there is another problem if the motor windings of the motor-compressor have been burned out or over-heated to the point where the insulation on the winding has been damaged.

When this occurs, a resinous material very similar to varnish is thrown off. Most of it forms on the inner walls of the condenser, par-

ticularly the first one-third or one-half of the condenser. Within a comparatively short time, this varnish-like material is washed off by the "Freon," which is a very effective solvent, and if nothing is done to prevent it, is carried into the capillary tube and even back into the new compressor. The new compressor will probably have to be replaced within six months to a year, and if again no precautions are taken, this second motor-compressor may have to be replaced within a month or so. So it keeps getting worse and worse.

One of the largest manufacturers of motor-compressors and hermetic units says that he has found no solvent suitable for field use that will wash this varnish-like material out of a condenser. However, the "Freon" and oil, both hot from the compressor discharge, will soon loosen this material and carry it through the system.

In any case where there is evidence that the motor of the motor-compressor was burned out or became excessively hot, the system should be thoroughly blown out and washed out, using Stoddard Solvent or perhaps one of the proprietary solutions on the market. This will probably not remove all or perhaps any great part of the varnish-like material from the condenser, but it will at least remove the contaminated oil and refrigerant.

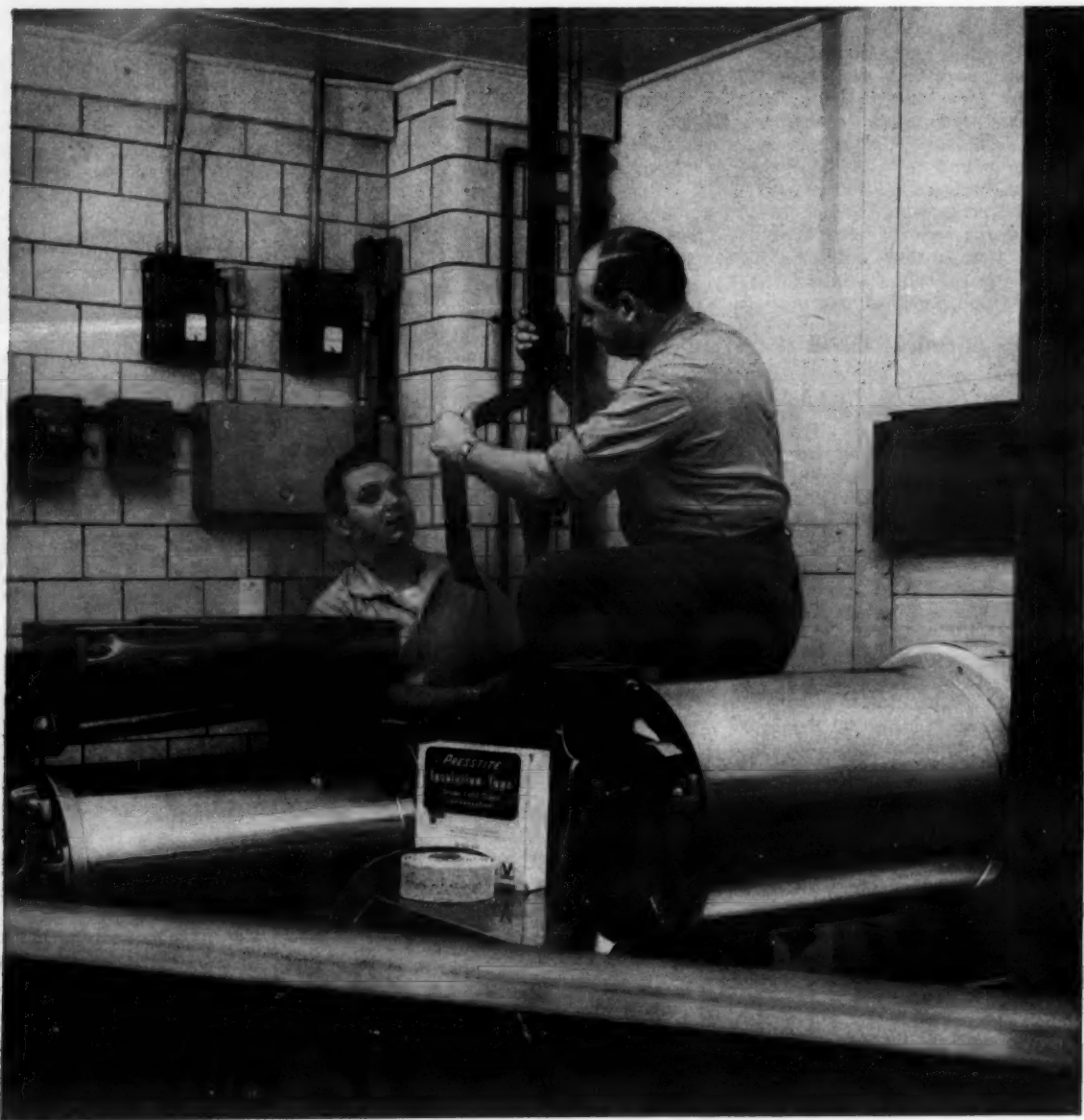
One company recommends that if the motor of the motor-compressor burns out, that the old condenser be replaced as well as the motor-compressor, and the old condenser scrapped.

Regardless, a good drier-strainer of generous size (not just a small drier holding a few ounces of desiccant) should be installed at the outlet of the condenser. This is to not only remove the moisture in the system (water is actually produced chemically from over-heated insulation of the windings) but also to filter out the varnish-like material that is cut out of the condenser and washed around throughout the system.

If it is a small system, using a capillary tube, and having only a small charge of refrigerant, a large drier will disturb the proper functioning of the system, for the large drier will act as a receiver and continue to feed refrigerant to the evaporator after the motor-compressor stops, and cause a flood back at the beginning of the next running cycle.

Therefore, it is better to replace this large drier-strainer after a few days, with a small drier holding only a few ounces of desiccant. At the same time, the amount of refrigerant charge will also have to be readjusted.

If the system or the replacement motor-compressor is not provided with a charging valve, one should be installed at the condenser outlet, as a convenience in adding refrigerant and adjusting the charge as required.



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Summary for July, August, and First Eight Months, 1954  
Complete Electric Household Refrigerators Only—Sales by Sizes—Units  
AUGUST (15 Companies)

	Domestic	Canadian	Foreign	Total
1. Less than 4 cu. ft.	.....	.....	.....	.....
2. 4 cu. ft.	1,510	.....	31	1,541
3. 5 cu. ft.	47	.....	3	50
4. 6 cu. ft.	1,991	.....	318	2,309
5. 7 cu. ft.	14,007	189	1,405	15,601
6. 8 cu. ft.	56,108	761	4,859	61,728
7. 9 cu. ft.	48,459	71	4,254	52,784
8. 10 cu. ft.	48,509	524	1,268	50,301
9. 11 cu. ft.	30,407	172	929	31,508
10. 12, 13 cu. ft. and up.	39,655	320	868	40,843
11. Total	240,693	2,037	13,935	256,665

Refrigerators Having Two Exterior Doors (All Sizes Included In Above) ..... 26,880 ..... 75 ..... 548 ..... 27,503

FIRST EIGHT MONTHS (15-16 Companies)

	Domestic	Canadian	Foreign	Total
1. Less than 4 cu. ft.	.....	.....	.....	.....
2. 4 cu. ft.	13,676	1	864	14,541
3. 5 cu. ft.	369	26	104	499
4. 6 cu. ft.	28,196	202	9,684	38,082
5. 7 cu. ft.	151,548	6,148	15,825	173,521
6. 8 cu. ft.	553,641	12,043	50,149	615,833
7. 9 cu. ft.	404,000	6,870	30,871	441,541
8. 10 cu. ft.	417,841	15,730	13,963	447,534
9. 11 cu. ft.	380,995	6,792	12,650	400,437
10. 12, 13 cu. ft. and up.	311,553	4,582	8,655	324,790
11. Total	2,261,819	52,194	142,765	2,456,778

Refrigerators Having Two Exterior Doors (All Sizes Included In Above) ..... 265,850 ..... 1,622 ..... 6,340 ..... 273,812

## Refrigerator Sales --

(Concluded from Page 1, Col. 4)  
month of 1953 for the first time this year, though only by 1%. In August, U. S. sales were 12% ahead of last year.

Sales to Canada in both July and August were down sharply, 31% and 71%, respectively. Sales to other foreign countries in July were down 25% from the previous year but in August they were up 17% over the '53 figure. Total sales for July were 2% behind last year.

August sales, however, while better than the preceding August, were 22% under July. Sales in the United States were down 21%, to Canada down 68%, and to other foreign countries down 15%.

## Perfection Reduces Electric Range Prices

CLEVELAND—Perfection Stove Co. has announced an immediate reduction of from \$50 to \$100 on its electric range list prices "to enable its dealers to meet discount house and other cut price competition—at their regular profit margins."

No reduction on gas range prices is anticipated because prices in that industry seem to have stabilized, the company said.

Price of Perfection's deluxe model L-411 was lowered \$100 to \$279.95, while another model, L-412, was reduced \$80 to \$249.95. Two models, L-204 and L-306, were reduced \$50, the former to \$139.95 and the latter to \$149.95.

New prices on other models are: L-307, \$169.95; L-305, \$199.95; L-305TA, \$199.95; L-309, \$229.95; L-309TA, \$229.95; L-409, \$229.95; L-410, \$259.95; L-413, \$279.95.

Perfection also announced that "to assist dealers in financing the extra volume the new prices should create," it is extending the dating to Dec. 31, 1954.

"Under the plan," the company explained, "October, November, and December shipments will be dated Dec. 31, with a 3% discount allowed on October shipments paid for Nov. 10."

"There will be a 2½% discount on November shipments paid Dec. 10, or a 2% cash discount Jan. 10 or net by Feb. 28 on the October, November, and December shipments."

A complete electric range merchandising kit is being provided the dealers to further help them cash in on the reduced prices.

The kit includes a 48-in. by 13-in. window streamer, a series of "Save \$\$\$\$" tie-in posters, newspaper ads for local use, illustrated full-line "Selector Charts," and a cooperative advertising plan whereby Perfection repays 60% of the dealer's local advertising costs up to a full 10% of purchases made.

## Program for ASRE Meeting In Phila.--

(Concluded from Page 1, Col. 4)  
generalized curricula in engineering colleges.

At the same time, a water conservation conference, headed by R. M. Westcott of Holladay and Westcott, Los Angeles consulting engineers, will discuss problems of lating to the use and treatment of water in industry.

### EVOLUTION OF SELF-CONTAINED ICE MAKER

That afternoon, the first technical session will present papers on evolution of the self-contained ice maker, the use of atomic energy to increase refrigerated storage life of fresh foods, and how the electrical properties of "Freon" compounds affect insulation in hermetic systems.

On Tuesday morning, the domestic refrigerator engineering conference, with E. T. Morton of Admiral Corp. in the chair, will discuss the problem of service, particularly of the hermetic system. Proponents and opponents of replacement of the complete system as contrasted with that of individual components will present their arguments. The serviceman's point of view will be presented by a member of the Refrigeration Service Engineers Society.

Paralleling this conference, the second technical session will hear papers on heat transfer coefficients in horizontal tube evaporators, results of a field investigation of drinking water usage conducted by the National Bureau of Standards, and vapor pressure of water solution of lithium bromide.

On Tuesday afternoon, a research program development symposium will vie for the attention with a series of seven informal round-table seminars at which no papers will be read and no recordings will be made of discussions.

### RESEARCH PROGRAM TO BE DISCUSSED

The symposium, presided over by Dean W. R. Woorich of the University of Texas, will consider whether the ASRE should sponsor a separate research program or collaborate with other societies. Participating in the discussion will be representatives of educational institutions, manufacturing firms, and research laboratories.

The seminars are designed to provide refrigeration engineers with an opportunity to sit down and discuss informally some of the selected problems they encounter in their daily work. It is expected that from these discussions will emerge suggestions for technical papers and subjects for research.

Departing from precedent, a full day session has been scheduled for Wednesday.

During the morning, the third technical session, directed by F. Y. Carter of Detroit Controls Corp., will hear papers on the "hydrophobic" behavior of certain desiccants, in-place studies of insulated structures, and problems in prevention of ice formation and its removal from metal surfaces.

Concurrently, Herbert L. Laube of Remington Corp. will chair an air conditioner conference, which will hear a report on the

Austin, Texas village project where 22 homes using different systems of air conditioning serve as a field laboratory. The conference will also discuss adding summer air conditioning.

On Wednesday afternoon, the fourth technical session will be presided over by John Engalitch of the Baltimore Aircoil Co. Scheduled papers cover a new approach to refrigeration coil calculations, automatic instrumentation for compressor testing, and developments in cryogenics.

At the same time, Dr. Walter O. Walker of the University of Miami will lead an informal conference on desiccants. Under discussion will be such problems as what does the manufacturer require of a drier, and how should driers be applied to a system.

Another feature of the 50th annual meeting will be a technical research exhibit consisting of some 20 non-commercial displays of important research developments leading to the advancement of the art of refrigeration.

Emphasizing the advance the refrigeration industry has made since ASRE was organized 50 years ago, a display of photomontage views of old refrigerating equipment of pre-1930 vintage along side modern replacing units will be shown. The displays are furnished by manufacturers.

### ENTERTAINMENT PLANNED

Entertainment planned for the meeting includes a reception Sunday evening, a party Monday evening featuring an ice show, and the traditional ASRE cocktail party and dinner dance Tuesday.

Outstanding feature, however, will be the anniversary luncheon on Monday. At this time prominent industry leaders will be presented and new society officers installed.

Highlight of the luncheon will be the presentation of a time capsule containing microfilms of the charters of the 35 sections and a letter from ASRE President A. J. Hess, extending congratulations to his successor.

The capsule is to be opened in December, 2004, the 100th anniversary of the society.

While the national society celebrates its golden jubilee, the host Philadelphia section will celebrate its 25th anniversary.

## Fair Trade Appeal--

(Concluded from Page 1, Col. 2)  
signers, are invalid under the 14th Amendment and the Commerce Laws of the Constitution.

Lionel Corp. was the defending party in the Grayson-Robinson and Klein cases. It argued that the court had already settled the constitutionality of fair trade laws in its 1936 decision in the "old Dearborn case."

Still pending before the high court was another fair trade case, an appeal by Masters, Inc. from a ruling in a suit filed against it by General Electric Co. This appeal was filed much later than the others.

## Sues, Young & Brown Sets Up Fair-Trade Program

LOS ANGELES—C. P. Culbert, vice president in charge of sales for Sues, Young & Brown, Inc., has announced that all of the distributing firm's franchised lines (Norge home appliances, Zenith television and radio, Ironite ironers, Lewyt vacuum cleaners) are being fair traded.

In a letter to dealers in the southern California marketing area, Culbert said:

"All dealer franchises on all product lines distributed exclusively by Sues, Young & Brown, Inc., are hereby immediately cancelled."

The letter said the SYB field sales organization would begin immediately to issue written dealer authorizations and fair trade agreements for the product lines distributed by SYB.

At the time of issuance, the organization would detail the principles and policies under which Sues, Young & Brown believes dealers may best cultivate the business of the consuming public, insure their own success, and gain confidence and prestige for the product lines they retail, Culbert stated.

### Stahl, Myers Form Firm

HOUSTON, Texas—Stahl and Myers Air Conditioning Co., Inc. of Houston was recently incorporated, records in the Secretary of State's office show. The incorporators, Joe Stahl, Clara Stahl, and Sam G. Myers, listed the capital stock as \$10,000.

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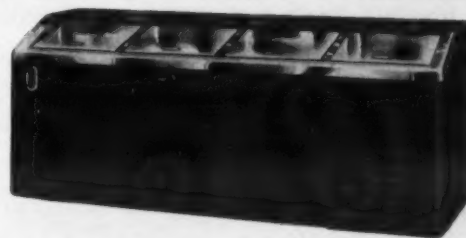
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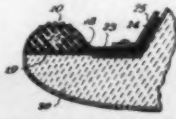
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# PATENTS

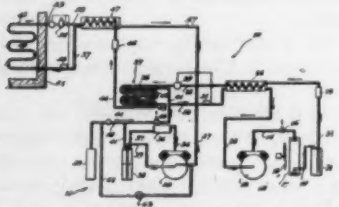
Week of June 15

**2,680,388. REPLACEMENT GASKET FOR REFRIGERATOR DOORS AND THE LIKE.** Harry W. Jarrow, Chicago, Ill. Application January 8, 1952. Serial No. 265,400. 4 Claims. (Cl. 20-69.)



1. A replacement gasket adapted to be adhered to a refrigerator door or the like in place of the beading of a permanently attached gasket which has a web connected to said beading, which comprises, a resilient member having a generally semi-circular section, there being a groove formed in the bottom thereof at one corner, said groove adapted to provide a lip for engagement over a gasket web in replacement of the bead thereof, said lip being tapered and highly resilient and extending substantially to the plane of the base of the said replacement gasket whereby in applying the said lip to a web, the said lip will require to be compressed to produce thereby a tight joint.

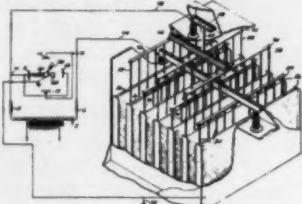
**2,680,966. FLURAL STAGE REFRIGERATION SYSTEM.** Frank L. Haas, Skokie, Ill., assignor to Haas & Co., Chicago, Ill., a corporation of Illinois. Application Dec. 19, 1951. Serial No. 262,439. 9 Claims. (Cl. 62-3.)



9. In a refrigeration system, a closed refrigeration circuit comprising a compressor, a condenser and an evaporator, means for receiving refrigerant when the pressure thereof increases beyond a predetermined value in approaching ambient temperature in said refrigeration circuit comprising a charging and discharging reservoir connected with the downstream end of said condenser and the input side of said compressor, a valve connected be-

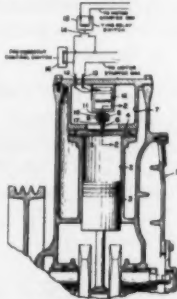
tween said reservoir and the downstream end of said condenser and operable to pass refrigerant to said reservoir upon increase in pressure beyond said predetermined value, and valve means connected between said reservoir and the input side of said compressor for enabling said reservoir to pass refrigerant to said compressor at a pressure corresponding to that from said evaporator.

**2,681,122. ENERGIZATION SYSTEM FOR ELECTROSTATIC PRECIPITATORS.** Rudolf G. Streiber, Somerville, N. J., assignor to Research Corp., New York, N. Y., a corporation of New York. Application March 10, 1953. Serial No. 341,438. 7 Claims. (Cl. 133-7.)



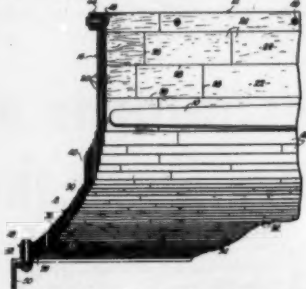
1. An electrical precipitator comprising a plurality of parallel collector plate electrodes; discharge electrodes between said plate electrodes, said discharge electrodes being connected to opposite sides of a high-voltage source, a connection from each of said sides to at least one of alternately arranged terminals of a rectifier switch having a movable switch arm electrically connected to a stationary terminal; a connection from said last terminal to said collector plate electrodes; and synchronous driving means operative to successively connect said switch arm to alternate ones of said alternately arranged terminals.

**2,681,177. COMPRESSOR UNLOADING MECHANISM.** George W. Hartwell, Springfield, Mass., assignor to Worthington Corp., a corporation of Delaware. Application Feb. 14, 1950. Serial No. 144,167. 3 Claims. (Cl. 230-24.)



1. In an unloading mechanism for compressors, an unloader finger engaging the inlet valve of a compressor, an electric solenoid including a core, a housing connected to said core, a head on said unloader finger and slidably located within said housing, a power spring in said housing and in engagement with said head for establishing a yieldable connection between the solenoid core and unloader finger, and a return spring engaging said housing.

**2,681,178. LAMINATED FAN RING FOR COOLING TOWERS.** Leon T. Mart, Mission Township, Johnson County, Kans., assignor to The Marley Co., Inc., Kansas City, Kans., a corporation of Kansas. Application April 24, 1950. Serial No. 157,719. 4 Claims. (Cl. 230-133.)



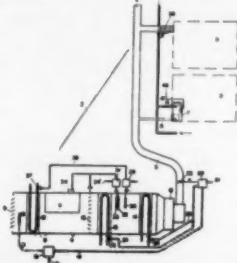
1. A fan ring for cooling towers comprising a tubular body including a plurality of relatively telescoped bands, said bands progressively decreasing in diameter as one end of the body is approached, each edge of each band being in spaced parallelism with the proximal edge of the band next adjacent thereto, whereby to form a flared portion in the body, the vertical distance between said edges of the bands progressively increasing as said one end of the body is approached for rendering said flared portion arcuate.

**2,681,179. FAN RING FOR COOLING TOWERS.** Homer E. Fordyce, Gasland, Mo., assignor to The Marley Co., Inc., Kansas City, Kans., a corporation of Kansas. Application May 2, 1950. Serial No. 159,447. 8 Claims. (Cl. 230-133.)



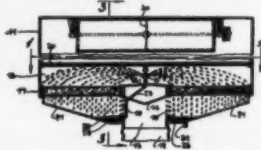
1. A fan ring comprising a pair of annular members disposed in spaced planes; a wall circumscribing said members and including a plurality of elongated, initially flat, flexible strips, each bearing against the members exteriorly thereof; and means deforming the strips, said means engaging the strips and joining the members for holding the strips tensioned inwardly in frictional engagement with the members, said means engaging the strips intermediate the ends thereof in inwardly offset relationship to a plane passing through said members for holding the strips under tension and longitudinally arched inwardly.

**2,681,182. AIR CONDITIONING SYSTEM AND METHOD OF OPERATION.** William L. McGrath, Syracuse, N. Y., assignor to Carrier Corp., Syracuse, N. Y., a corporation of Delaware. Application Sept. 10, 1949. Serial No. 115,010. 6 Claims. (Cl. 236-44.)



1. In an air conditioning system for a building structure containing a plurality of areas to be conditioned, the combination of a conditioner remote from the areas for dehumidifying and cooling primary air to predetermined conditions of humidity and temperature in accordance with exterior temperature, a plurality of individual units disposed in the areas to be conditioned, at least one unit being disposed in each area to be conditioned, conduits for supplying conditioned primary air from the conditioner to each unit, means for delivering primary air from the conditioner through said conduits at a static pressure in excess of 1/4" water gauge and at a velocity of the order of 2000 to 3000 feet per minute, means including a wall having a plurality of nozzles positioned in the path of the primary air in each unit for discharging the primary air in the unit at a relatively high velocity to induce a substantial volume of secondary air from the area being conditioned into the unit to mix with the primary air, and a humidifying device in the unit for cooling the mixture of primary and secondary air.

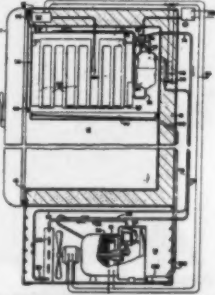
**2,681,217. EVAPORATIVE AIR-COOLER.** Neal A. Pennington and Lawrence A. McKinney, Tucson, Ariz., assignors to eleven-twentieths to said Pennington, one-tenth to said McKinney, one-tenth to Robert H. Henley, Tiptonville, Tenn., and one-fourth to Roger Sherman Hoar, South Milwaukee, Wis. Application June 13, 1951. Serial No. 231,394. 5 Claims. (Cl. 261-88.)



1. In an evaporative cooler for air conditioning, the combination of: a substantially vertical air conduit; two substantially parallel spaced substantially horizontal porous air-permeable pads athwart the conduit; a liquid sprinker centrally located between the two pads, so as to wet both pads; a liquid supply-pipe, leading to the sprinker; a sump extending across the conduit below the lower of the two pads; a constricted portion of the conduit, extending vertically through the middle of the sump, directly below the sprinker; a downwardly outwardly inclined roof completely covering the constricted portion, to prevent the entrance of water into this constricted portion and to divert the water into the sump; and openings in the sides of this constricted portion beneath the edges of the roof, to permit the passage of air.

Week of June 22

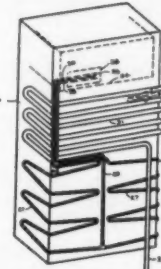
**2,681,550. DEFROSTING REFRIGERATION APPARATUS.** Graham S. McCloy, Springfield, Mass., assignor to Westinghouse Electric Corp., East Pittsburgh, Pa., a corporation of Pennsylvania. Application July 27, 1951. Serial No. 233,935. 6 Claims. (Cl. 62-116.)



1. In refrigeration apparatus, the combination of an insulated cabinet structure enclosing a food storage chamber and including an evaporator disposed within said chamber for cooling media therein, a closed refrigerant circuit for conveying

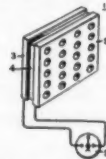
refrigerant to and from said evaporator, said circuit comprising a compressor, a suction conduit for conveying refrigerant from said evaporator to said compressor, a condenser for condensing refrigerant vapor compressed by said compressor, a storage vessel for selectively trapping or releasing refrigerant liquid, a liquid line including a restrictor for conveying refrigerant from said condenser to said vessel, first conduit means connecting a lower portion of said vessel with said evaporator, said first conduit means having a portion thereof elevated with respect to the liquid level in said vessel, second conduit means connecting an upper portion of said vessel with said evaporator, said second conduit means having a restriction therein, said restriction being of a size sufficient to pass all of the refrigerant flowing to said evaporator during the refrigerating operation of said circuit, and means for heating the refrigerant in said vessel to increase the vapor pressure in said vessel whereby refrigerant liquid and vapor is forced from said vessel to said evaporator through said first conduit means to effect defrosting of said evaporator, said first conduit means having a portion thereof in heat exchange relationship with a portion of said cabinet structure cooled by said evaporator whereby the warm refrigerant flowing through said first conduit means defrosts that portion of said cabinet structure.

**2,681,551. CONCEALED WATER STORAGE REFRIGERATORS.** Herschel F. Powell, Greenville, Mich., assignor to Gibson Refrigerator Co., Greenville, Mich., a corporation of Michigan. Application July 20, 1949. Serial No. 105,802. 3 Claims. (Cl. 62-141.)



1. In a refrigerator cabinet having imperforate inner liner walls and outer shell walls spaced therefrom, said liner walls forming a food storage compartment cooled by heat transfer to a freezer unit, apparatus for cooling, storing and dispensing water, said apparatus being completely disposed upon the vertical walls of said liner and comprising: a continuous conduit having a source of water at an inlet end and a valve at another end terminating in said cabinet for controlling the admission of water into and from said conduit, said conduit being disposed upon the concealed exterior of said liner with at least a portion of said conduit extending upwardly from the lowermost portion of said freezer unit, and with a portion of said conduit also extending within an area terminating a short vertical distance below the lowermost portion of said freezer unit, and mastic means having good thermal conductivity and being in heat-exchange relation with said conduit and said liner wall for extending the heat exchange contact area of said liner and conduit and restricting heat exchange between said conduit and is ambient.

**2,681,571. ELECTRICAL MOISTURE INDICATOR.** Howard I. Becker, Vicksburg, N. Y., assignor to General Electric Co., a corporation of New York. Application March 15, 1949. Serial No. 81,568. 8 Claims. (Cl. 73-335.)



1. A device for providing an indication of the humidity and water content of the atmosphere, comprising a duct through which the atmosphere can be made to flow, a supply of porous dielectric thread, said thread having been impregnated with a

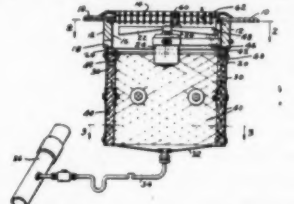
solution of an electrolyte and dried, means to draw successive portions of said thread at a given rate across said duct to contact said atmosphere, a pair of contact brushes of dissimilar substances occupying different levels in the electromotive series, said brushes being positioned to make contact with said thread upon its exit from said duct, and a device responsive to the voltage produced between said brushes for indicating said water content.

**2,681,572. RELATIVE HUMIDITY INDICATOR.** Anthony H. Lamb, Hillside, N. J., assignor to Weston Electrical Instrument Corp., Newark, N. J., a corporation of New Jersey. Application July 5, 1950. Serial No. 172,120. 2 Claims. (Cl. 73-338.)



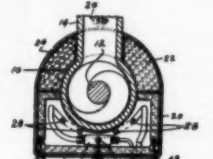
1. A housing for a glass thermometer, said housing being formed of sheet plastic material and comprising a substantially rectangular base; integral end walls extending upwardly from the base; integral side walls extending upwardly from the base, said side walls including upper portions extending above the said end walls and formed into opposed channels; a set of aligned tabs formed integral with the base and extending upwardly therefrom in diverging planes, each tab having an aperture therein; one of said end walls having an opening aligned with the apertures in the tabs; the recited arrangement being such that a glass thermometer can be inserted into the housing through said opening and apertures and such thermometer will be frictionally retained in relatively-fixed position within the housing by reason of contact between the surface of the thermometer and at least a portion of the walls defining the apertures in the diverging tabs.

**2,681,609. FLOOR UNIT AIR CONDITIONER.** Wayne Drager, San Fernando, Calif. Application Dec. 3, 1951. Serial No. 259,615. 2 Claims. (Cl. 98-105.)



1. A floor unit air conditioner comprising an open box-like framework adapted to be inserted in an opening in the floor of a room, a grille for the floor opening, a motor and fan mounted beneath the grille, water evaporating pads removably positioned in the framework, a source of current for the motor, a source of water supply for the pads, manual control means for the current and water sources, said control means positioned in the grille, a bottom for the open framework, a drainage pipe in the bottom, water distribution troughs in the framework above the pads, said water distribution troughs having perforated sloping bottoms and extending around the upper periphery of the framework, the absorbent pads being of a size and contour to be removably fitted into and interlocked with each other in the rectangular framework, said framework composed of angles.

**2,681,676. REFRIGERATOR FOR MEAT GRINDERS.** Fred H. Stiner, North Hollywood, Calif. Application Dec. 3, 1951. Serial No. 259,575. 1 Claim. (Cl. 146-182.)



A refrigerator for meat grinders, including a casing adapted to fit on to the bottom of the grinder cylinder, refrigerator having been impregnated with a

(Continued on next page)

## Keeps Posted



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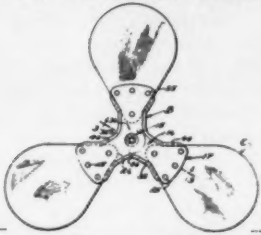


## PATENTS

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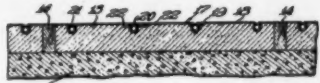
ating coils in the casing, a second casing composed practically entirely of insulating material adapted to fit about the top portion of the grinder cylinder, encircling bands and fastening nuts for releasably retaining the two casings in operating position, control means for the refrigerant in the coils, a motor for driving the grinder, the refrigerating unit, the grinder and its associated parts all being separable from the motor, and a removable bottom and a drain cock in the casing for the refrigerated coils.

**2,681,708. FAN CONSTRUCTION.** Edward H. Mix, Los Angeles, Calif.; Gail H. Mix, executor of said Edward H. Mix, deceased. Application Sept. 1, 1950, Serial No. 182,757. 2 Claims. (Cl. 170-173.)



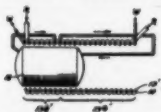
1. A fan including, a rigid hub, a sheet metal spider carried by the hub and having a substantially flat center portion fixed to the hub, substantially flat circumferentially spaced shanks radiating from the center portion and heads on the outer ends of the shanks and projecting beyond the edges thereof, and like separate blades attached to and projecting from the heads, the center portion of the spider having an annular stiffening rib projecting from one side thereof and the shanks having substantially flat middle portions and substantially flat edge portions in planes inclined relative to the planes of the middle portions, the edge portions at adjacent edges of adjoining shanks being joined together.

**2,681,796. RADIANT FLOOR HEATING PANEL.** George M. Rapp, Hamden, Conn., assignor to Houdaille-Hershey Corp., Detroit, Mich., a corporation of Michigan. Application Jan. 5, 1951, Serial No. 204,605. 1 Claim. (Cl. 257-124.)



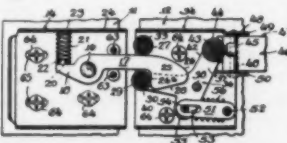
A radiant floor heating structure comprising a two-course concrete floor slab including a base course of coarse aggregate and finish course of light-weight aggregate concrete, a plurality of rectilinearly arranged partition members defining generally rectangular floor sections embedded in said top course, plate and tube type heat exchangers each including a backing plate having plane edge portions in contact with and supported by said partition members and extending in flush surface relationship with the adjacent heat exchangers to provide a level upper surface for said floor structure, said backing plates having spaced, parallel grooves formed therein, and heat exchanger tubing seated in said grooves and adapted for the flow of heat exchange fluid therethrough, the walls defining said plate grooves overlying the tubing disposed therein to engage more than a semi-periphery of said tubing and to provide re-entrant groove portions on the under surface of said plate into which the material of said upper course extends to anchor said heat exchangers thereto.

**2,681,797. HEAT EXCHANGER FOR COOLING FLUIDS.** Paul D. Van Vleet, Chicago, Ill., assignor to The Liquid Carbonic Corp., Chicago, Ill., a corporation of Delaware. Application Feb. 8, 1952, Serial No. 270,690. 17 Claims. (Cl. 257-242.)



1. A heat exchanger for reducing the temperature of a fluid, comprising a tube forming a coil for the flow of a refrigerant therethrough, a second tube forming a coil in heat exchange relation with said refrigerant coil for the flow therethrough of the fluid to be cooled, said second-mentioned coil forming a pre-cooler component adjacent the downstream end of said refrigerant coil and an aftercooler component adjacent the upstream end of said refrigerant coil, and a tank for the storage of precooled fluid interposed between said pre-cooler and said aftercooler for receiving the precooled fluid after the precooling thereof.

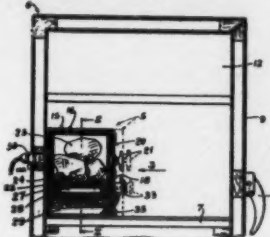
**2,681,819. LATCH CONSTRUCTION.** William O. Burke, Rockford, Ill., assignor to National Lock Co., Rockford, Ill., a corporation of Delaware. Application June 28, 1950, Serial No. 170,913. 4 Claims. (Cl. 292-226.)



1. In a latch construction for releasably latching a door to a cabinet having a spring-biased keeper pivotally mounted on the cabinet and provided with a hook at its locking end projecting toward the door, a latch assembly carried by the door and including a supporting bracket secured to the door, a roller in said bracket and adapted to be engaged by the keeper as the door is closed, a pin projecting through said roller and fixedly mounted in the bracket, a bell crank pivotally mounted on the bracket and carrying a roller at one end movable toward and away from the first mentioned roller

providing a latch member for engaging the locking end of the keeper and retaining the keeper between said rollers, a second roller carried by the other end of the bell crank, means adapted to engage the last mentioned roller for swinging the bell crank about its pivot and urging the locking roller out of locking engagement with the end of the keeper, a projection on said bell crank, and spring-biasing means engaging said projection and urging the first mentioned roller on the bell crank into interlocking engagement with the keeper.

**2,681,972. THAWING DEVICE.** Jesse Harold Holland, Redondo Beach, Calif. Application Nov. 23, 1952, Serial No. 322,929. 2 Claims. (Cl. 219-13.)



2. In combination, a refrigerator having a vertical side wall with a plug-in connection therethrough connected with an outside source of electric current and a floor with parallel guide rails mounted thereon, and a thawing device consisting of a casing having temperature insulated walls, an electric heater within said casing, a plug-in connection carried by said heater and electrically connecting said heater with the aforesaid plug-in connection carried by the refrigerator, and a manually adjustable thermostatic control for said heater carried externally by said casing, said casing being backwardly movable within said refrigerator between said rails to a position wherein said plug-in connections register with each other.

### AVAILABLE FOR LICENSING OR SALE

The General Electric Co. is prepared to grant non-exclusive licenses under the following patents, upon reasonable terms, to domestic manufacturers. Applications for license may be addressed to: General Counsel, Patent Services Dept., General Electric Co., 1 River Rd., Schenectady, N. Y.

Pat. 2,553,291. Pressure Temperature Relay. May 15, 1951.  
Pat. 2,622,407. Two-Temperature Refrigerating System. Dec. 23, 1952.  
Pat. 2,645,905. Electric Defrosting Arrangement for Refrigerators. July 21, 1953.  
Pat. 2,651,704. Temperature Responsive System. Sept. 8, 1953.  
Pat. 2,662,254. Refrigerator Breaker Strip Assembly. Dec. 15, 1953.  
Pat. 2,665,557. Lubricant Separating System for Refrigerating Machines. Jan. 12, 1954.  
Pat. 2,665,558. Two-Temperature Refrigeration System. Jan. 12, 1954.  
Pat. 2,665,566. Evaporator Defrosting Arrangement. Jan. 12, 1954.  
Pat. 2,667,755. Automatic Defrost Control. Feb. 2, 1954.  
Pat. 2,669,853. Refrigerated Cabinet Having Movable Condenser. Feb. 24, 1954.

### Micro Switch Revamps Sales Territories, Staff

**FREERPORT, Ill.**—A geographical realignment of sales divisions and a number of changes in top sales personnel are announced by Micro Switch, a division of Minneapolis-Honeywell Regulator Co.

The changes, according to Frank Wilsey, general sales manager, were prompted by a rapid growth in the sales volume, coupled with an increase in personnel and changing conditions and markets.

Previously Micro Switch divided the United States into four sales divisions, with a division manager in charge of each. Under the new setup, there will be two sections—eastern and western—with a sales manager in charge of each.

Emmett N. Hughes, former west coast division manager, will be western sales manager in charge of all sales operations on the west coast, including the Rocky Mountain states. He will be headquartered in Los Angeles.

John K. Lincoln will be eastern sales manager, in charge of sales operations in all states east of the Rocky Mountains. He will headquarter at Micro Switch's executive offices in Freeport. Previously he was eastern division manager with headquarters in New York.

Anderson Wacaser, former central division manager with headquarters in Cleveland, will be transferred to the home office to head up market research, a new section in the sales department.

Micro Switch now maintains branch offices in 17 cities throughout the country staffed by 44 field engineers to provide switch engineering assistance to customers.



### PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request to the purchasing officer under which the purchase is listed in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date.

#### DEPARTMENT OF DEFENSE

It is not necessary to refer solely to the issuing office for additional data on a bid invitation issued by any of the following U. S. Army Ordnance Offices: Ordnance Tank Automotive Center; Detroit Arsenal; Frankford Arsenal; Picatinny Arsenal; Raritan Arsenal; Ordnance Ammunition Center, Joliet, Ill.; Rock Island Arsenal; Springfield Armory; Watertown Arsenal; and Watervliet Arsenal. Complete information on any purchase listed by any of those offices alone can be obtained from the Ordnance District Office nearest you. Its address is on file in your nearest Department of Commerce Field Office. Do not ask an Ordnance District Office for information on a purchase unless it is listed by one of the above-named offices.

Description	Quantity	Invitation No.	Opening Date
Chicago Quartermaster Depot, Quartermaster Purchasing Division, Chicago, Illinois			
Refrigerator mechanically cooled 12 cu. ft. fed spec AA-R-211C.	62 ea.	55-127-B	17 Nov 54
Post Purchasing and Contracting Office, Building 2333, Fort Leonard Wood, Missouri			
Conversion of coal fired furnace to automatic oil fired, complete with all controls and storage facilities as follows:		AV-23-037-55-15	12 Nov 54
Williamson Furnace in family-type quarters.	425 ea.		
American furnace in family-type quarters.	20 ea.		
Furnaces in senior officer's quarters, bldg. No. 842, 843, 844, 845, 2051, 2055 and 445.	7 ea.		
Armed Services Medical Procurement Agency, 84 Sands St., Brooklyn, N. Y.			
Biologicals mechanical refrigerator.	25 ea.	55161-B	4 Nov 54

### Andrews To Manage General Controls Div.

**GLENDALE, Calif.**—Stan Andrews, regional manager for the Dallas area of General Controls Co., is moving to the company's California headquarters to be manager of the Appliance Controls Div.

Andrews, who has been with the company for eight years, will be located at the firm's recently dedicated new appliance controls plant in Burbank, adjacent to the main General Controls plant in Glendale.

In his new assignment, Andrews will supervise all phases of marketing the company's rapidly expanding line of automatic controls for water heaters, ranges, automatic washers, space heaters, clothes dryers, and other home appliances.

According to J. F. Ray, vice president in charge of sales for General Controls Co., the new arrangement is expected to provide closer liaison on appliance controls with the company's 38 regional and branch offices throughout the country.

### Kessler Now Sole Owner Of Savannah, Ga. Firm

**SAVANNAH, Ga.**—T. C. Kessler who, with R. G. Strickland, has owned and operated Kessler Refrigeration & TV Co. since it was established several years ago, announces that he has purchased the interest of Strickland in the business, and is now the sole owner.

Strickland was forced to retire from active business because of ill health, it was explained.

With store and offices at 1514 Bull St., the sales and service company has recently completed and occupied a large service department at 808 Pennsylvania Ave. Kessler's services and repairs all makes of household refrigerators and television sets. C. S. Kessler is master technician and shop foreman.

Kessler Refrigeration has long been dealer for Philco and Westinghouse refrigerators and television sets, which are handled at the Bull St. store, together with a line of other household electrical appliances.

## Emmett Contracts

Contracting Officer, Williams Air Force Base, Chandler, Ariz.  
Replacement of forced warm air furnaces and space heaters in seven bldgs. and one hundred ten family apartments.  
Job 55-6-B 27 Sep 54

Purchasing and Contracting Office, Sewart A.F.B., Tennessee  
Service or Item Description: Job (IFB-40-602-55-8-B) 9 Nov 54  
Installing Air Conditioning System in Bldg. 216.

#### GENERAL SERVICES ADMINISTRATION

Description	Quantity	Reference No.	App. Bid Date
Business Service Center, General Services Administration, Region 3, 7th and D Sts., Washington 25, D. C.	2 ea.	4H-52964-R	19 Nov 54
Package type air conditioners, 5 ton cap. for domestic duty.			

#### U. S. DEPARTMENT OF COMMERCE

Procurement Branch, Civil Aeronautics Administration, Washington 25, D. C.			
Ventilator thermostats, up to 95° F. range, not adversely affected by temp. from minus 30 to plus 125° F., rated to start and stop 1/4 HP motor, 115 and/or 230 vac; accord. spec. CAA-1014A.	10 to 150 Each	6344	2 Nov 54
Procurement Branch Civil Aeronautics Administration, Federal Office Building, Kansas City, Missouri			
Filters, air, Dustop or similar in following sizes:		3-55-3	8 Nov 54
10 x 10 x 1	3500 ea.		
10 x 10 x 2	1000 ea.		
20 x 24 x 2	100 ea.		
20 x 20 x 2	400 ea.		

### CONTRACTS AWARDED THROUGH OCT. 26

Bureau of Ships, Washington, D. C.  
12 ton unit equipment for air conditioning 440 V. 3 phase, 60 cycle, A-C (IFB-600 206-55-8).—24, \$116,400.—Carrier Corp., New York, New York.  
General Services Administration, Business Service Center, 575 U. S. Courthouse, Chicago, Illinois  
Electric Water Coolers.—322 ea., \$32,077.—Westinghouse Electric Corp., 1825 "K" St., N.W., Washington 6, D. C.

## CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.  
RATES for all other classifications \$10.00 per insertion. Limit 50 words. 20¢ per word over 50.  
ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other address by actual word count. Please send payment with order.

#### POSITIONS WANTED

**FIELD SERVICE** supervising and trouble shooting. Twenty years' electrical utility experience. Includes ten years' installing and trouble shooting refrigeration and air conditioning. Manage own wiring and refrigeration business as sideline. Very familiar with all types of electrical problems. Age 43. Excellent references. Willing to travel. Certificate member of R.S.E.S. BOX A5077, Air Conditioning & Refrigeration News.

**COULD A** man experienced in all phases of air conditioning and refrigeration help in your business? Have spent 10 years in service and installations, 2 years in engineering, and 8 years in sales. Can follow a job through from design to final payment. Prefer a small organization that is growing. All replies answered. BOX A5081, Air Conditioning & Refrigeration News.

**SUCCESSFUL SALES** engineer, age 27, four years sales, air conditioning, refrigeration and heating equipment (package equipment, coils, air handling units, washers, chillers, pumps & towers), seeks opportunity with manufacturer or distributor. Will travel or relocate. Car. Now located New York area. Resume furnished on request. BOX A5082, Air Conditioning & Refrigeration News.

#### POSITIONS AVAILABLE

**REFRIGERATION ENGINEER** required to assume responsibility of sales application department. Must have knowledge of heat transfer, plus proven ability to translate technical engineering ratings and data into informative pieces used by the sales department. Not less than five years' experience required with mechanical engineering degree or equivalent and field sales training experience. Reply to Mr. Campbell, ACME INDUSTRIES, INC., 600 N. Mechanic St., Jackson, Michigan.

**SERVICE REPRESENTATIVE**—excellent opportunity for man experienced on appliances and commercial products as field service representative with company branch. Give complete details by letter as to experience and references. FRIGIDAIRE SALES CORP., 13940 Tireman Ave., Detroit 28, Michigan.

**PROJECT ENGINEER** for the development of air conditioning equipment. Must be a graduate engineer, experienced in the design and development of hermetically sealed refrigerating circuits and heat transfer surfaces. Excellent position with well known manufacturer. Location Mid-West. Send complete resume of education, experience and salary requirements to BOX A5068, Air Conditioning & Refrigeration News.

**ENGINEER**—WE are looking for a man, age 28 to 45, with sheet metal design experience and some background in refrigeration. This man probably has a decent position now but recognizes its possibilities as limited. Possibilities for advancement are excellent with fast growing company engaged in design and production of special purpose air conditioning and refrigeration equipment. Inquiries will be handled in strictest confidence. Our employees know of this advertisement. Submit biographical sketch. BOX A5074, Air Conditioning & Refrigeration News.

**EXPERIENCED SALESMAN** for nationally advertised line of electric drinking water coolers and dehumidifiers selling to

wholesale distributors. Both eastern and western territory open. Salary and expenses, and possibly car furnished. Consideration given to good merchandising record with other appliances and acquaintance with territory and trade. Applications confidential. Give details and references first letter. BOX A5075, Air Conditioning & Refrigeration News.

**SALES ENGINEER** to head air conditioning department of old established Terre Haute, Indiana company. Do design and layout work and sell the finest line of air conditioning equipment and also heating systems. We offer salary plus percentage, or partnership in business to the right man who has the above qualifications. BOX A5079, Air Conditioning & Refrigeration News.

**SERVICE MANAGER** for air conditioning company north side of Chicago. Must have thorough knowledge of maintenance contracts and prices, also able to train and aid servicemen in field on difficult jobs. State experience, references, and past income in first letter. BOX A5063, Air Conditioning & Refrigeration News.

#### EQUIPMENT FOR SALE

**FOR SALE:** Brand new popular brand 1/2 HP compressor with flywheel and service valves. \$52.50—Model F 1 HP \$62.50. Price includes free transportation to destination. Send for parts catalog listing other money saving values. WALTER W. STARR, 2833 Lincoln Avenue, Chicago 13, Illinois.

**ONE TEMPRITE** portable draft beer cooler—Demonstrator—in good working condition—\$300.00. Complete with cooler, condensing unit, air compressor, etc. Ideal for demonstrator, club, fraternity, and picnic rental, etc. FOB Battle Creek, Michigan. First come, first serve. BOX A5080, Air Conditioning & Refrigeration News.

**150 TON** air conditioning equipment: 2-75 ton Westinghouse compressors also chiller condenser, pumps, controllers, etc. This equipment has never been used. Buy it at big savings from Kentucky warehouse. BOX A5064, Air Conditioning & Refrigeration News.

#### BUSINESS OPPORTUNITIES

**FOR SALE:** commercial and domestic refrigeration sales and service business, established many years, with stock and best accounts in city. Located in the southern part of Connecticut. Plenty of work for three men. For full particulars, write BOX A5078, Air Conditioning & Refrigeration News.

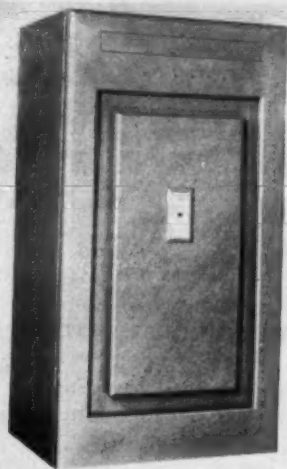
#### MISCELLANEOUS

**SALES ENGINEER** with full knowledge of refrigeration. Calling on wholesale supply houses, servicemen, restaurants and bakeries in California, Nevada, and Oregon. Have established customers. Will consider suitable line for this type clientele. Bondable. Your reply treated with absolute confidence. Write R. ADAMS, 626 Congress, Pacific Grove, California.

**"SEALED UNIT Rebuilding—Basic Tools & Methods"**—an instructive copyrighted manual giving complete details on economically equipping your shop to handle hermetic rebuilding. Exclusive trade secrets unavailable elsewhere. Mail postcard for descriptive folder. H. W. CUSTER, P. O. Box 98, Center Line, Michigan.

**SERVICEMEN—DEALERS:** If it's sales you want, here's your answer. Norge replacement units low at \$46.50 exchange f.o.b. Detroit. Coldspot and Tecumseh units remanufactured. Authorized factory repair station for room air conditioners. For full particulars, call or write MODERN REFRIGERATION COMPANY, 12541 E. McNichols, Detroit 8, Mich.





GIBSON self-contained air conditioners are available in 10 new models ranging from two to five hp.

## Gibson Line--

(Concluded from Page 1, Col. 3) model is claimed to have 30% more space for fresh foods than refrigerators of comparable capacity. Other features include adjustable shelves, "Swing'r Crisp'rs" at the bottom, left-over shelf with containers, door shelves, "Butt'ry," and bacon conditioner. Fully automatic defrosting is provided.

The other unusual refrigerator is called the "Strat-A-Zone" which offers four separate cooling zones. Upper portion of the box provides moderate and moderate cold temperatures. Below it is a full-width closed freezer compartment. At the bottom are two swing-out crispers for moist storage. The fourth zone consists of five door storage shelves plus butter and bacon conditioners. A swing-out storage shelf in the upper zone and automatic defrosting are other features.

### ROOM AIR CONDITIONERS

The new room air conditioners are designed to permit three positions of room projection and may be flush mounted. They will harmonize with modern or traditional decor, the company said.

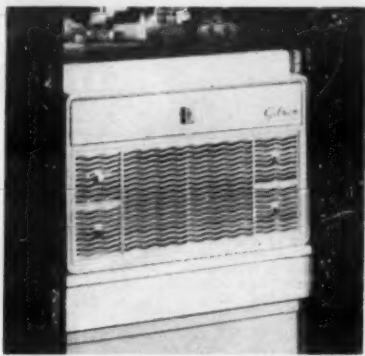
There are standard and deluxe models in  $\frac{3}{4}$  and 1-hp. sizes and a  $1\frac{1}{2}$ -hp. model. The deluxe models are equipped with an ozone lamp to remove stale odors and sweeten the air. They also have pushbutton controls, fresh air intake and exhaust, electrostatic dust magnet filters, and a heater for chilly days.

All exterior parts are galvanized, rust resistant metal.

### HOME FREEZERS

The food freezer line includes 7, 11, 17, and 18-cu. ft. upright models plus 10, 14, and 20-cu. ft. chests. The HFU-11 is designed as a companion to the Market Master refrigerator. It features Gibson stay-packet shelves, a new swing-out basket for odd shaped or single packages, a special canned juice dispenser, and door racks.

The 1955 range line includes three 40-in. and two 30-in. models. The deluxe model 40-in. range has the Gibson "Ups-A-Daisy" deep well cooker, "Tel-O-Matic" light which glows when correct settings have been made for automatic cooking, two ovens (one with door window), combination electric



GIBSON room air conditioner, shown above, is designed to permit three positions of room projection, and may be flush mounted.



GIBSON Market Master is all refrigerator without freezer compartment to fit the needs of families with food freezers. Thirty per cent more fresh food storage space is claimed.

timer and interval timer, and seven-speed pushbutton controls with individual pilot lights.

The deluxe 30-in. range has a full-width 24-in. oven with non-fog door window, seven-speed pushbutton controls, and combination electric timer and minute timer. This model is available either in white or "Surftone" green.

### JOHNSON SAYS FUTURE LOOKS GOOD

In addressing the distributors, Johnson said that "the outlook for immediate business in the months of November and December and the months to follow is excellent. The future looks good and most of the economic signposts point to a good year for appliance sales in 1955."

He supported this view by saying that "employment is stabilized, housing starts are at a new record, the birth rate is up, and retail trade has held up well during recent months."

Johnson added that the consumer's instalment credit is on the rise, prices are more stable—all signs "pointing to a healthy economic climate in the near future."

Gibson, he declared, "is not overloaded with inventories at its factories," and pointed out that "distributor inventories are at the lowest point they have been in any one period during the last four years." With dealer inventories equally low, he concluded that the sales picture for the company was a bright one.

### RACCA Unit Organized by Greater N. Y. Contractors

CLEVELAND—A new RACCA of Greater New York was formed recently at a meeting of Greater New York refrigeration and air conditioning contractors at the New Yorker hotel, according to Ray Kromer, executive vice president of the Refrigeration & Air Conditioning Contractors Association.

A slate of officers was elected and a steering committee appointed.

This makes a total of six new local associations that have become affiliated with RACCA-National since April of this year, Kromer said. He added that RACCA anticipates doubling this number of new associations previous to the group's convention in Miami Beach Dec. 2-4.

## Welker Elected President of Wholesalers--

(Concluded from Page 1, Col. 4)

N. C. He has been a member of the board of directors for four years and is the director of ARW from Region 4.

Other members of the Executive Committee are: R. E. Warwick, Plumbing Wholesale Co., Jackson, Miss., vice president; E. L. Tramposh, Refrigeration Equipment Co., Kansas City, Mo., secretary; K. G. Wight, K & M Supply Co., Tulsa, Okla., treasurer; and N. K. Mason, Mason Supply Co., Columbus, Ohio, immediate past president.

Other members of the board of directors are: I. J. Fajans, Aetna Supply Co., New York City; J. P. Glass, Chase Supply Co., Chicago; W. J. Hieber, Refrigerative Supply, Inc., Portland, Ore.; A. H. Holcombe, Jr., Victor Sales & Supply Co., Philadelphia; C. G. Koopman, Supply Distributors Corp., Boston; and W. C. Miessemer, Arizona Refrigeration Supplies, Inc., Phoenix, Ariz.

ARW's Executive Committee will hold its first meeting early in December.

The meetings in which the membership took part in the discussions took the form of panel discussions, with the membership asking questions from the floor, and the "W3M3" session, which meant that table groups of six (3 manufacturers and 3 wholesalers)

sat down to work out answers to the question, "If the combined groups in the industry could sponsor but one activity to promote better distribution through the wholesaler, what would that activity be?"

There were a lot of answers developed by the "table workshops" of course, but most of them centered about combined efforts of manufacturers and their representatives, and the wholesalers, to educate those selling equipment to the customer on better methods of selling, installing, and servicing.

At this session the wholesaler group heard James Emmett, Jr., Marsh Instrument Co. and vice president of ARI, declare that:

(1) ARI is studying and making plans for an over-all industry publicity and promotion campaign.

(2) The manufacturers' association is studying the matter of providing a universal-type royalty policy on industry products.

In some of their sessions the wholesalers gave forth with some of their gripes, major ones seeming to be:

(1) "Direct selling" or "sales by agents" by manufacturers of items which the wholesalers believe would be best distributed through them.

(2) Lack of uniform sales policies by manufacturers (in other words, doing it one way one time or in one part of the country, but

not in another).

(3) Lack of standard pricing policy. In this respect, there seemed to be a desire for list price schedules, and a clearer definition of discount policies to industrial users.

The discussions included some comprehensive sessions on credit policies and sales promotion methods, which may be covered in more detail in future issues of the News.

## New Norge Post--

(Concluded from Page 1, Col. 2)

dent in charge of operations for Southern Appliances, a Charlotte, N. C. distributor.

He has been vice president of Crosley Distributing Corp., Cincinnati, in charge of factory branch distributing activities, and vice president in charge of sales of Coolerator Co.

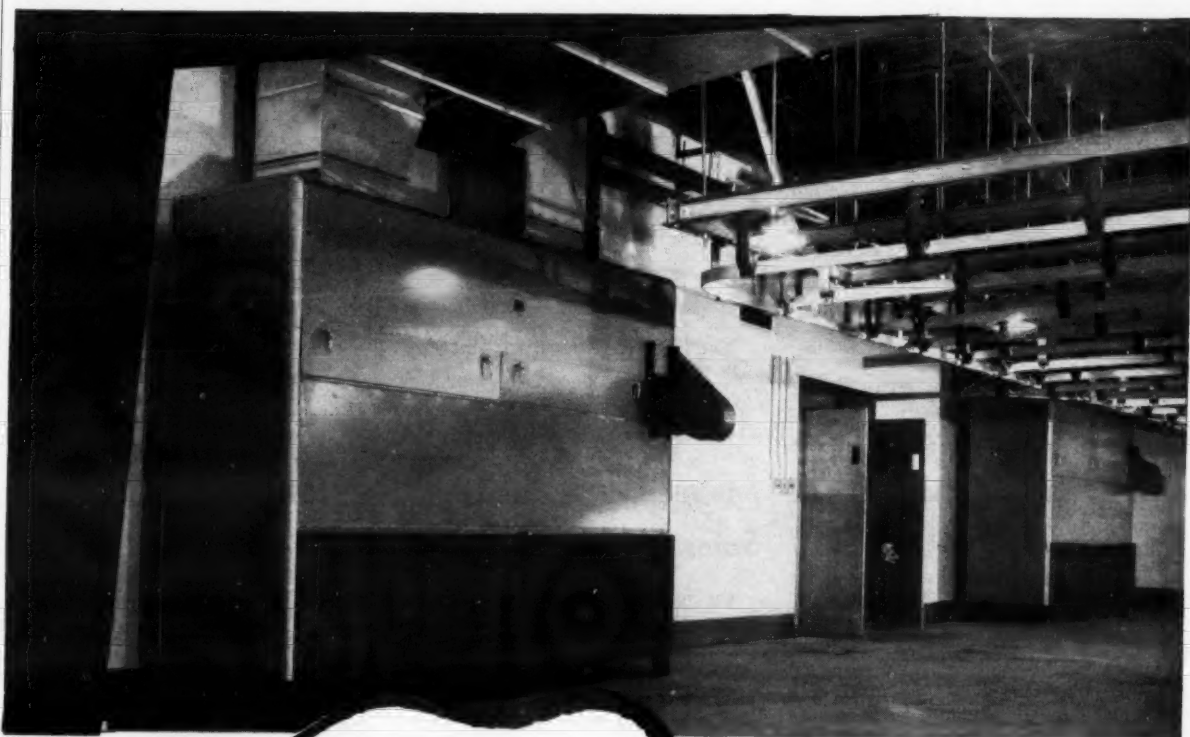
For two years Conley was national sales manager of the kitchen sales division of Hotpoint, Inc. at Chicago.

## Great, Scott's!

BINGHAMTON, N. Y.—Air conditioning is a feature of the newly-opened Scott's Greeting Card Center at 40 Court St. here.

## Air Cool Dept. Store

CHATTANOOGA, Tenn.—Miller Brothers Co.'s new department store at Brainerd and Germantown Rds. is air conditioned.



big product cooling job?...

## BUSH PRODUCT COOLERS WILL INSURE A GOOD JOB

Bush units are constructed around rigid angle iron frames which support bearings, shaft and motor. This construction guarantees alignment . . . eliminates fan troubles, and insures quiet operation.

Large amount of coil surface allows low air velocity, minimizing dehydration of produce. Coils are circuited to provide maximum capacity with minimum pressure drop.

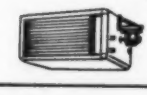
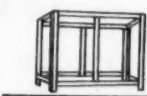
Bush product coolers are available in floor or ceiling models, with top or front outlets and directional louvers.

Low temperature water defrost units are equipped with ample water spray nozzles, insuring complete coil coverage—positive defrosting. Baffles on air inlet eliminate splashing during defrosting.

Wide range of sizes and styles makes Bush Product Coolers your best bet on all cold storage applications: fruit, meat and produce packing and storage plants . . . fur and fabric storage, frozen foods, locker plants . . . dairy products, candy storage, fish storage, etc.

CONSULT YOUR NEAREST BUSH SALES ENGINEER ON ANY PRODUCT COOLING PROBLEM. HE'LL BE GLAD TO HELP OUT.

WRITE FOR COMPLETE INFORMATION.



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**E-Z-SEE**  
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